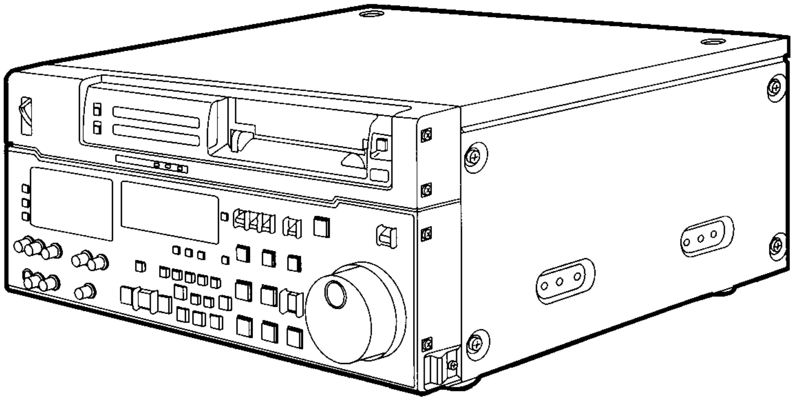
ORDER NO. BSD0101M602S

Service Manual

DVCPRO

DVCPRO Studio VTR

AJ-D850BE



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Introduction

AJ-D850BE was equipped with the JOG Audio improvement kit (AJ-MK850E) and the SDTI/SDI Interface board (AJ-YAC850P) to AJ-D850E.

Please refer to the following the Service Manuals.

AJ-D850P/E Vol.1, Order No. VSD9903M901A (or CD-ROM)

AJ-D850P/E Vol.2, Order No. VSD9903M901B

AJ-MK850E, Order No. BSD0008M604

AJ-YAC850P, Order No. VSD9909M908

Specifications

GENERAL

Power supply:	AC 220 – 240 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature:	5°C to 40°C (41°F to 104°F)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	16.8 kg
Dimensions (W × H × D):	424 × 175.2 × 415 mm
Recording format:	DVCPRO format
Recording tracks:	Digital video Time code; Recorded in sub-code area Digital audio; 2 channels Cue signal; 1 track Control (CTL); 1 track
Tape speed:	33.854 mm/sec
Tape:	1/4-inch thin magnetic layer metal tape
Editing accuracy:	±0 frame (using time code)
Tape timer accuracy:	±1 frame (using continuous CTL signal)
Servo lock time:	Less than 0.5 sec. (colour framing/ standby ON)

VIDEO

(Digital video)

Sampling frequencies:	Y; 13.5 MHz/PB, PR; 3.375 MHz
Quantizing:	8 bits
Error correction:	Reed-Solomon product code

(Digital IN/analogue component OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±0.5 dB) 5.75 MHz (–2 dB) PB, PR; 25 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–5 dB) typ.
S/N ratio:	Better than 60 dB
K factor:	Less than 1%

(Analogue component IN/component OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±1 dB) 5.75 MHz (–3 dB) PB, PR; 25 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–6 dB) typ.
S/N ratio:	Better than 55 dB
K factor:	Less than 1%

(Analogue composite IN/composite OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±1 dB) typ.
DG:	Less than 4%
DP:	Less than 3°
Y/C delay:	Better than 20 nsec
K factor:	Less than 2.5%

(Video input connector)

Analogue component input:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite input:	BNC×2, loop-through, 75Ω on/off
Reference input:	Analogue composite BNC×2, loop-through, 75Ω on/off
Serial digital component input :	BNC x 2, active through SDI: Complies with the EBU Tec. 3267-E standard. SDTI: Complies with the SMPTE 305M and 321M standards.

(Video output connector)

Analogue component output:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite output:	BNC×3 Video1/video2/video3 (superimpose on/off)
Serial digital component output:	BNC x 3 SOUT1: Used for output of both SDTI and SDI output. SOUT2,3: Used exclusively for SDI output. SDI: Complies with the EBU Tec. 3267-E standard. SDTI: Complies with the SMPTE 305M and 321M standards.

(Video signals adjustment)

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output chroma phase:	±30°
Video output black level:	±100 mV
Video output sync phase:	±15 µsec
Video output SC phase:	±180°
Video output Y/C delay:	±300 nsec

AUDIO

(Digital audio)

Sampling frequencies:	48 kHz
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ±1 dB
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, “A” weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk:	Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	18 dB
Emphasis:	T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response:	300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analogue input (CH1/CH2):	XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2):	XLR×1, AES/EBU format
Serial digital input:	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track input:	XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analogue output (CH1/CH2):	XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2):	XLR×1, AES/EBU format
Serial digital output:	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track output:	XLR×1, low impedance, +4/0/–20 dBu
Monitor output:	XLR×2, low impedance, +4/0/–20 dBu
Headphones:	Variable level, mini-jack, 8Ω

Other input/output connector

Time code input:	XLR×1, 0.5 to 8 Vp-p
Time code output:	XLR×1, 2.0 Vp-p
RS-422A input/output:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions shown are approximately.
Specifications are subject to change without notice.

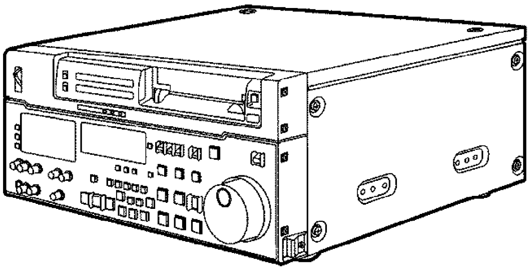
ORDER NO. VSD9903M901A
D20

Service Manual

DVCPRO Studio VTR

DVCPRO

AJ-D850P/E



SPECIFICATIONS

Specification

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SAFETY PRECAUTIONS

1. Operating Instructions

AJ-D850P

AJ-D850E

2. SERVICE INFORMATION

2.1. ERROR RATE CONFIRMATION PROCEDURE

2.1.1. Function of Front Switch

2.1.1.1. Front Panel Bottom side

DIP SW	ON	OFF
SW1-1	● SERVICE mode (SERVICE MENU display) ● SW1-2 to 1-4 Valid	● NORMAL mode (SET UP MENU display) ● SW1-2 to 1-4 Invalid
SW1-2	Error Rate Display Mode: SLOW	Error Rate Display Mode: FAST
SW1-3	Force R/P Head Playback	Force PB Head Playback
SW1-4	VITABI Decode ON	VITABI Decode OFF

Note:

In case of DIP SW1-1 is ON, SW1-2,1-3 and 1-4 becomes valid.

2.1.1.2. Front Panel Bottom section

	4F	2F
CF SW	Error Rate is display	Error Rate is not display

	ON	OFF
SYNCHRONIZE SW	Conceal OFF	Conceal ON

Note:

In case of DIP SW1-1 is ON, above switches change the function as indicated as above table.

2.1.1.3. TC MODE SW (TC/CTL switch and TC/UB switch on the Front Panel

Inner and Outer correction are set by combination of TC/CTL and TC/UB switches setting.

MODE	INNER Correction	OUTER Correction
CTL	OFF	OFF
TC	ON	OFF
UB	ON	ON

Note:

In case of DIP SW1-1 is ON, above switches change the function as indicated as above table.

2.1.1.4. Correspond to Service Menu of Front Switches

The Menu function in the RF ADJUST menu and Front switches are correspond as follows.

DIP SW1 (Front Panel Bottom side)

DIP SW	MENU No.	Item
SW1-2	B28	ERROR MODE
SW1-3	B27	PB MODE
SW1-4	B26	VITERBI MODE

(Front Panel Bottom section)

	MENU No.	Item
SYNCHRONIZE SW	B25	CONCEAL MODE

TC MODE SW (TC/CTL switch and TC/UB switch on the Front Panel)

MODE	MENU No.	Item
CTL, TC, UB	B24	ECC MODE

Note:

Setting of Service Menu have priority to setting of Front Switches, when the Service Menu is open.

2.1.2. Condition of Error Rate display

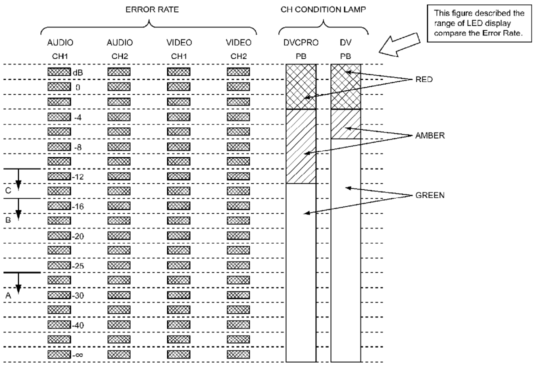
①.DIP SW1-1 : ON
②.CF SW : 4F

⇒ Audio Level Meter on the Front Panel changed to Error Rate display mode.

The Level Meter indicated as level of Error Rate, Audio CH1(Lch), Audio CH2(Rch), Video CH1(Lch) and Video CH2(Rch).

The Video and Audio Error Rate displayed on Level Meter as indicated as below figure.(front view at meter).

2.1.3. Specification of Error Rate



This figure described the range of LED display compare the Error Rate.

When confirm the Error Rate, please refer to specification of Error Rate as indicated as below, it level follow the menu setting as indicated as below table.

Menu setting

Item of the MENU	DVCPRO	DV
B28 : ERROR MODE	FAST	FAST
B27 : PB MODE	PB H	RP H
B26 : VITERBI MODE	ON	ON
B25 : CONCEAL MODE	ON	ON
B24 : ECC MODE	AL OFF	AL OFF

Note:

Upper side table described setting by Service Menu.
Those setting can be set by Front SW as described as previous page.

Specification of Error Rate

	VTR mode	
DVCPRO (PB)	DVCPRO (PB Head) alignment tape playback	Under the
DV (R/P)	DV (RP Head) Alignment tape playback	Under the
DVCPRO (Confi)	DVCPRO confidence playback (REC mode)	Under the

2.2. Service Menu Information

< Operation Procedure >

1. The “REMOTE/LOCAL” switch set to “LOCAL” on the front panel.
2. Set the Dip SW 1-1 to ON position on the bottom side of front panel.
3. Press the MENU button on the front panel, then appeared Main menu of Service menu on the screen as indicated as below.

```
                SERVICE-MENU
                   No. A00

  * A00     :    SERVO ADJUST
    B00     :    EQ ADJUST
    C00     :    RF ADJUST
    D00     :    VIDEO ADJUST
    E00     :    AUDIO ADJUST
    H00     :    OTHER ADJUST
    END
```

4. Move the star mark “ * ” by Search Dial to select the each Adjustment menu.
5. Press the SET button, then open the Adjustment Menu follow the selected item (A00 to H00) on the Main menu.
6. Each Adjustment item are selected by Search Dial.
7. For change the value or setting, holding the Search button while rotate the Search Dial.(same way of SET UP menu).

<KEY function for Service Menu>

[MENU button] :

1. Move to Main menu on Service menu from SET UP menu.
2. Move to Main menu from ADJUST menu on the Service menu
3. Move to SET UP menu from Main menu on Service menu.

[SET button] :

1. Move to ADJUST menu from Main menu on Service menu.

[SERACH DIAL] :

1. Move the cursor “ * ” for select the each item.
2. Change the numerical value or setting of each item on ADJUST menu.

(Increase adjustment value by turn Search Dial to clockwise and decrease adjustment value by turn Search Dial to counter-clockwise.)

[SEARCH button]

1. For change the numerical value or setting value, holding this button while rotate the Search Dial.

< Store the adjustment and setting value to the memory >

When menu is escape from Adjustment menu to Main menu by press MENU button, each data write to the memory.

The contents of each “Adjustment menu” which are described on behind page.

Press the MENU button on the Main menu condition, then escape from Service menu mode.

A00:SERVO ADJUST

No.	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMEN
A01	PG SHIFTER	0~1649~4095 0~1649~4095	(RISE display) PG SHIFTER AUTO ADJ (FALL display).
A02	T TORQUE	-128~0~+127 Initial:0	Correct the offset value of T REEL MOTER DRIVE
A03	S TORQUE	-128~0~+127 Initial:0	Correct the offset value of S REEL MOTER DRIVE
A04	PB GAIN P	-128~1~+127	LISTA SENSITIVITY Adj.(PB HEAD)
A05	PB LINEAR P	0 1 ON	LISTA LINEARITY Adj. (PB HEAD)
A06	RP GAIN P	-128~1~+127	LISTA SENSITIVITY Adj. (R/P HEAD)
A07	RP LINEAR P	0 1 ON	LISTA LINEARITY Adj. (R/P HEAD)
A08	RP GAIN	-128~1~+127	LISTA CONSUMER DV COMPATIBILITY CONFIRM
A09	RP LINEAR	0 1 ON	LISTA CONSUMER DV LINEARITY Adj.
A10	MOTOR CHECK	0 OFF 1 CAP 2 DRUM 3 T REEL 4 S REEL	

B00:EQ ADJUST

Note: The mark “ * ” indicated as common adjustment item for DVCPRO and DV.

NO	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT
B01	PB PLL PHASE	-128~-40~+127	PB PLL PHASE Adj. *
B02	PB PLL SLICE	-128~-70~+127	PB PLL SLICE LEVEL Adj. *
B03	PB AEQ	-128~+75~+127	PB AUTO EQ Adj. *
B04	PB GAIN L	-128~+30~+127	PB Lch EQ GAIN Adj. *
B05	PB PHASE L	-128~-55~+127	PB Lch EQ PHASE Adj. *
B06	PB GAIN R	-128~+30~+127	PB Rch EQ GAIN Adj. *
B07	PB PHASE R	-128~-55~+127	PB Rch EQ PHASE Adj. *
B08	RP PLL PHASE	-128~+50~+127	RP PLL PHASE Adj.
B09	RP PLL SLICE	-128~-70~+127	RP PLL SLICE LEVEL Adj.
B10	RP AEQ	-128~+75~+127	RP AUTO EQ Adj.
B11	RP GAIN L	-128~+30~+127	RP Lch EQ GAIN Adj.
B12	RP PHASE L	-128~-55~+127	RP Lch EQ PHASE Adj.
B13	RP GAIN R	-128~+30~+127	RP Rch EQ GAIN Adj.
B14	RP PHASE R	-128~-55~+127	RP Rch EQ PHASE Adj.
B15	VTB PHASE 1	-128 +127	VITABI A/D CLOCK PHASE Adj. (LSB)
B16	VTB PHASE 2	-128 +127	VITABI A/D CLOCK PHASE Adj.
B17	VTB PHASE 3	-128 +127	VITABI A/D CLOCK PHASE Adj. (MSB)
B18	VTB PHS FINE	-128~-1~+127	VITABI A/D CLOCK PHASE ADJ. (FINE Adj.)
B19	PB MAIN DL	-128~-40~+127	PB EQ DELAY LINE Adj. *
B20	RP MAIN DL	-128~-40~+127	RP EQ DELAY LINE Adj.
B21	PB PLL VCO	-128~+66~+127	PB PLL VCO Adj.
B22	RP PLL VCO	-128~+66~+127	RP PLL VCO Adj.
B23	VTB GAIN	-31~-15~+32	VITABI A/D INPUT LEVEL Adj. *
B24	ECC MODE	0 ALL ON 1 OT OFF 2 AL OFF	ERROR CORRECTION INNER ON/OUTER ON ERROR CORRECTION INNER ON/OUTER OFF ERROR CORRECTION INNER OFF/OUTER OFF
B25	CONCEAL MODE	0 ON 1 OFF	ERROR CONCEALMENT ON ERROR CONCEALEMENT OFF *This CONCEAL MODE function is only effective, above ECC MODE set to “ALL ON”.
B26	VITABI MODE	0 AUTO 1 ON 2 OFF	VITABI ON VITABI ON VITABI OFF
B27	PB MODE	0 PB H 1 RP H	FORCED PB HEAD PLAYBACK FORCED RP HEAD PLAYBACK
B28	ERROR MODE	0 FAST 1 SLOW	ERROR DISPLAY MODE “FAST” ERROR DISPLAY MODE “SLOW”
B29	EQ AUTO ADJ	0 STOP 1 START	PB EQUALIZER AUTO Adj.
B30	DEFAUT	0 LOAD 1 SAVE	LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE

Note:

The items (No. B24 to B28), which operated only active on the EQ ADJUST mode. And these function have priority over setting of DIP SW and Front SW as indicated as below.

1. Function of Front Switch

Front Rear DIP SW

DIPSW	ON	OFF
SW1	● Service MENU SW2~4 Valid	● SET UPMENU ● SW2~4 Invalid
SW2	Error Rate Display: SLOW	Error Rate Display: FAST
SW3	Force R/P Head Playback	Force PB Head Playback
SW4	Vitabi Decode ON	Vitabi Decode OFF

Front Bottom DISPLAY

	4F	2F
CF	Error Rate is displayed	Error Rate is not displayed.

	ON	OFF
SYNCHRONIZE	Conceal OFF	Conceal ON

Front TC MODE SW

	INNER Correction	OUTER Correction
CTL	OFF	OFF
TC	ON	OFF
UB	ON	ON

“ How to LOAD or SAVE the adjustment value ”

Note:

This item (B30) is only active on the tape pass condition.

Press the SET button , the appear the message as indicated as below.

*SAVE

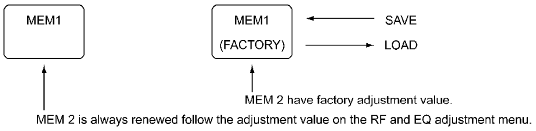
LOAD

END

Set the cursor “ * ” to SAVE or LOAD and press the SET button, then execute the program.

Note:

1. The VTR have two memory area for the adjustment value as indicated as below.


MEM1
MEM1
(FACTORY)
SAVE
LOAD
MEM 2 have factory adjustment value.
MEM 2 is always renewed follow the adjustment value on the RF and EQ adjustment menu.

2. We recommended the SAVE function does not use or the market, because the renewed adjustment value is stored to MEM 1 automatically.

C00:RF ADJUST

NO	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT
C01	REC CURR L	-128~0~+127	SETTING OF REC CURR (RP Lch)
C02	REC FREQ L	-128~0~+127	SETTING OF REC FREQ (RP Lch)
C03	REC CURR R	-128~0~+127	SETTING OF REC CURR (RP Rch)
C04	REC FREQ R	-128~0~+127	SETTING OF REC FREQ (RP Rch)
C05	RE CURR L	-128~0~+127	SETTING OF ERASE CURR (RE Lch)
C06	RE CURR R	-128~0~+127	SETTING OF ERASE CURR (RE Rch)
C07	RP PHASE L	-128~0~+127	RP Lch PLAYBACK PHASE CORRECTION
C08	RP PHASE R	-128~0~+127	RP Rch PLAYBACK PHASE CORRECTION
C09	RP MAG L	-128~0~+127	RP Lch PLAYBACK OUTPUT GAIN CORRECTION
C10	RP MAG R	-128~0~+127	RP Rch PLAYBACK OUTPUT GAIN CORRECTION
C11	PB PHASE L	-128~0~+127	PB Lch PLAYBACK PHASE CORRECTION
C12	PB PHASE R	-128~0~+127	PB Rch PLAYBACK PHASE CORRECTION
C13	PB MAG L	-128~0~+127	PB Lch PLAYBACK OUTPUT GAIN CORRECTION
C14	PB MAG R	-128~0~+127	PB Rch PLAYBACK OUTPUT GAIN CORRECTION
C15	REC SIG	0 NORMAL 1 CW	SELECTION OF THE RECORDING DATA CONTINU WAVE (CW) OR NORMAL DATA
C16	ECC MODE	0 ALL ON 1 OT OFF 2 AL OFF	INNER & OUTER CORRECTION ON INNER CORRECTION ON / OUTER CORRECTION INNER & OUTER CORRECTION OFF
C17	CONCEAL MODE	0 ON 1 OFF	CONCEAL ON CONCEAL OFF
C18	VITERBI MODE	0 AUTO 1 ON 2 OFF	VITERBI ON VITERBI ON VITERBI OFF
C19	PB MODE	0 PB H 1 RP H	PB HEAD PLAYBACK FORCIBLY RP HEAD PLAYBACK FORCIBLY
C20	ERROR MODE	0 FAST 1 SLOW	ERROR RATE INDICATION FAST ERROR RATE INDICATION SLOW
C21	TRACKING MOD	0 ATF 1 CTL	SELECTION OF TRACKING CONTROL MODE * This function is only active on the service Menu

C22	TRACKING VAL	-128~0~+127 Initial: 0	" IN CASE OF SELECT THE CTL MODE ON ABOV C20, TRACKING VALUE IS ADJUSTABLE" * TRACKING VALUE RANGE DATA 0 - 116 : RELATIVE TO 1 TRACK THEREFORE 0 TO 127 IS RELATIVE TO JUST OV
C23	REC OPTIMAIZ	0 STOP 1 START	SELECTION OF THE START/STOP ON AUTO REC Adj
C24	DEFAUT	0 LOAD 1 SAVE	LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE

D00:VIDEO ADJUST

NO	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT
D01	VIDEO BLANK	0 NORMAL 1 OFF	NORMAL : The video signal is blanked at video ed portion for protect the overshoot. OFF : Release the blanking function.
D02	V IN PLL	0 OFF 1 ON	
D03	VIDEO MUTE	0 NORMAL 1 MUTE	
D04	SELF DUB GEN	0 OFF 1 3RD 2 10TH	MULTI DUB TEST MODE
D05	DUBBING MODE	0 FREEZE 1 REPEAT	
D06	EE TEST MODE	0 NORMAL 1 DCI RT	NORMAL : EE MODE (BYPASS MODE) DCI RT : FULL EE MODE (DCI RETURN)
D07	HEAD SELECT	0 PB. REC 1 PB 2 REC. PB 3 REC	PRIOR TO PB HEAD FORCED PB HEAD PRIOR TO REC HEAD FORCED REC HEAD
D08	V SETUP =NTSC ONLY=	0 OFF 1 ON	VALID / INVALID SELECTION FOR SETUP MENU 613 : VIN SETUP AND 614 : VOUT SETUP 0 : SETUP MENU 613/614 NO DISPLAY 1 : SETUP MENU 613/614 DISPLAY
D10	CMPNT HUE =NTSC ONLY=	0 OFF 1 ON	VALID / INVALID SELECTION FOR SETUP MENU 615 : CMPNT HUE 0 : SETUP MENU 615 NO DISPLAY 1 : SETUP MENU 615 DISPLAY
D11	CMPNT SET UP =NTSC ONLY=	0 OFF 1 ON	VALID / INVALID SELECTION FOR SETUP MENU 616 : CMPNT SET UP 0 : SETUP MENU 616 NO DISPLAY 1 : SETUP MENU 616 DISPLAY

D13	TELETEXT INI =NTSC ONLY=	0 MOJI 1 NABTS	SELECT DEFALUT FACTORY(DEFALUT) VALUE IIEM 802:TELETEXT SEL ON SET UP MENU. 0 : MOJI (FOR DOMESTIC) 0 : NABTS (FOR OVERSEAS)

E00:AUDIO ADJUST

NO.	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT
E01	MASTER REF	0 FS-20 1 FS-18 2 FS-12	Select the position of " Reference level marker " Audio level Meter (CH1, CH2, CUE). 0: Set to -20dB position (For NTSC) 1: Set to -18dB position (For PAL) 2: Set to -12dB Position
E05	REF LEVEL2	0 0dB 1 -3dB	VALID / INVALID SELECTION IN/OUT REFERENCE FOR SET UP MENU. 0: VALID SELECTION -20 / 0 / +4dB 1: ONLY -3dB (for GERMANY)
E06	A VCO ADJ	0 NORMAL 1 48KHz 2 44KHz 3 32KHz	SELECT THE ADJUSTMENT MODE OF AUDIO VC ADJUSTMENT MODE.
E07	MIC IN LEV	0 DIS 1 ENA	VALID / INVALID SELECTION -60dB FOR SET UP 700 : CH1 IN LV AND 701 : CH2 IN LV 0: VALID SELECTION +4dB / 0 / -20dB 1: VALID SELECTION +4dB / 0 / -20dB / -60dB

H00:OTHER ADJUST

H01	STILL LIMIT	0 2min 1 1min	SELECTED UPPER LIMITED VALUE OF ITEM 400:STILL TIMER ON SET UP MENU. 0: 2min 1: 6min

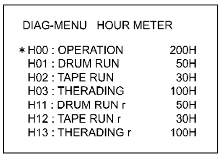
2.3. HOW TO RESET THE HOUR METER

1. Set the DIP SW 1-1 to OFF (Normal mode) position on the front panel bottom side.
2. Set the Dip SW 501-1 to ON and Dip SW 501-2 to OFF position on the SYSCON P.C.B.
3. Press "DIAG" button on the front panel, then appeared Warning Message on the screen.

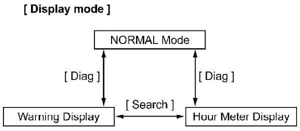
   Note:

   Normally message of "NO WARNING" appeared on the screen.
4. Press "SEARCH" button on the front panel, then appeared HOUR

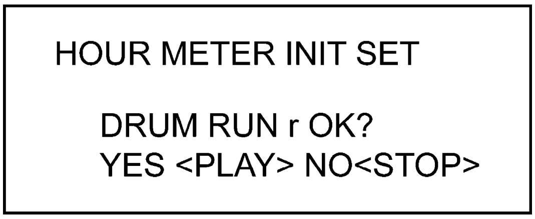
METER information on the screen as indicated as below.



```
DIAG-MENU   HOUR METER

*H00 : OPERATION         200H
 H01 : DRUM RUN           50H
 H02 : TAPE RUN           30H
 H03 : THERADING         100H
 H11 : DRUM RUN r         50H
 H12 : TAPE RUN r         30H
 H13 : THERADING r       100H
```



5. **Set the cursor to mark “r” indicated item (item No.11,12 or 13) and press the “RESET” button on the front panel, then appeared message on the screen as indicated as below.**



```
HOUR METER INIT SET

     DRUM RUN r OK?
     YES <PLAY> NO<STOP>
```

***When press the “PLAY” button, then execute the reset function.**
When press the “STOP” button, then cancel the reset command.

2.4. HOW TO CONFIRM THE SOFTWARE VERSION

1. **Turn on the power.**
2. **Press the EJECT button.**
3. **Press the PLAY and STOP button simultaneously, then displayed the soft version on the counter display of the front panel.**
   <example> FRONT n 1.00 - 01 - 1.00
4. **Press the PLAY and STOP button repeatedly, change the display of all soft version in order as indicated as below.**
   SYSCON → SERVO → A/V → SBC 1 → SBC 2 → I/F → FRONT

ROM location indicated as below table

Name	Reference number and Board
SYSCON	IC2 (SYSCON Board)
SERVO	IC235 (SERVO Board)
A/V	IC702 (A/V Board)
SBC 1	IC870 (REC PB Board)
SBC 2	IC910 (REC PB Board)
I/F	IC503 (SYSCON Board)
FRONT	C2 (FRONT CPU Board)

2.5. Replacement Procedure of the P. C. Board

Please refer to below table, It indicated as which board is necessary adjustment after board exchanged. And perform the adjustment follow the adjustment procedure on this manual.

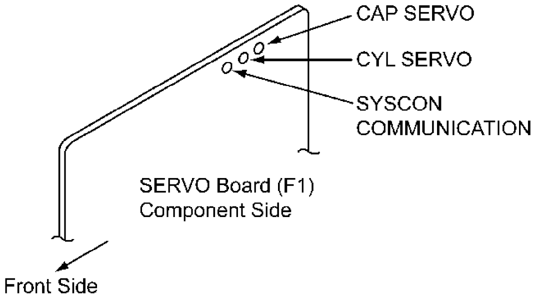
	Board	Adj.		Board	Adj.		Board	Adj.
F1	SERVO	OK	F5	REC PB	OK	H2	CUE	OK
F2	SYSCON	OK	F6	V IN	OK	H3	EQ	OK
F3	SIF(Option)	—	F7	A PROC	NG	H4	RF AMP	OK
F4	V OUT	OK	F8	ADDA	OK	—	HEAD BUFF	NG

Note:

1. If there is a ROM on P.C.Board, please confirm the software version. Refer to confirmation procedure of software version on previous page.
2. The DATA RAM(IC17) is installed on SYSCON Board and it data can not saved to other equipment.. When SYSCON Board exchanged, remove the IC17 on original Board and put it to New Board. Another way of move the data, write down all of User data, Service data and numerical value of Hour Meter and input the data to new RAM. But numerical value of Hour Meter can not input to VTR (Hour Meter information will be reset).

2.6. SERVO LED INFORMATION

SERVO LED light on Front Panel, when Cylinder and Capstan Servo are locked. In case of SERVO LED does not light on PLAY or REC condition, please check at LED condition on Servo P.C.Board for confirm the which Servo is faulty.
There are condition LED on the SERVO Board (F1) as follows.



- ● The LED nearest to front side light up, when Syscon CPU and SERVO CPU communication is correct.
- ● The center LED light up, when the cylinder servo is locked.
- ● The LED nearest to the Jack Board light up, when the capstan servo is locked.

Note:
In case of capstan servo does not locked, please use function of Tracking mode selection on Service menu for confirm which servo is fault ATF or CTL.

2.7. Auto Off Error Message

In case of AUTO OFF Error is occurred, AUTO OFF LED light and error message appear on the Front Panel.
The number of below table indicates as priority display of message, when some error occurred

at the same time.

No.	**Display (20 characters)**	**Contents**	**VTR Operation**
1	**Normal (EJECT)**	**After a cassette insertion, if cassette does not down within 6 seconds, VTR goes to EJECT mode.**	**EJECT**
	FRONT LOAD MOTOR	**After EJECT mode, if a cassette does not up within 6 seconds, [AUTO OFF] LED turns on and the message flashes.**	**STOP**
2	**Normal (EJECT)**	**Loading is not completed within 6 seconds, VTR goes to EJECT mode (unloading mode).**	**EJECT**
	LOADING MOTOR	**When unloading is not completed within 6 seconds, [AUTO OFF] LED turns on and message flashes.**	**STOP**
3	**SERVO CONTORL ERROR**	**If servo CPU does not respond within 1 seconds, [AUTO OFF] LED turns on and message flashes. <Actual Judgment> System control circuit sends COMM_TEST signal to Servo circuit and Servo circuit returns COMM_TEST_RET signal. If this signal is not returned within 1 seconds, “AUTO OFF” process is produced and Servo is reset for 50 ms.**	**STOP**
4	**SERVO ERROR**	**If only the Servo CPU perform reset operation by momentary power off, “AUTO OFF” occurred.**	**STOP**
5	**SERVO COMM ERROR**	**If Servo CPU does not response to command from SYSCON CPU during 10 second “AUTO OFF” LED is flashed.**	**STOP**
6	**FRONT LOAD ERROR**	**If Supply Reel Table rotated over time at Tape big. / end detected operation during Front loading**	**STOP**
7	**WIND UP REEL NOT ROTA**	**When Capstan shaft send the tape 3 cm, Take-up reel FG count number is less than regulation value.**	**STOP**
8	**WIND UP ERROR**	**Compare the tape movement between take up and supply reel, and if the difference is more than 2 cm, goes to “AUTO OFF” mode.**	**STOP**
10	**UNLOAD ERROR**	**Reel does not wind the tape in the unloading mode. Reel FG is counted in each mechanism mode.**	**STOP**
12	**S-FF/REW TIME/OVER**	**Reel operation does not finish at Tape beginning and end position.**	**STOP**
14	**DRUM ROTATE TOO SLOW**	**Cylinder rotary speed is too slow. In the cylinder on mode, cylinder PG interval is more than 1.5 ms for 5 seconds or cylinder PG is not detected for 1 seconds.**	**STOP**

15	DRUM ROTAE TOO FAST	Cylinder rotary speed is too fast. PG interval is less than 3 ms for 2 seconds.	STOP
16	CAP ROTATE TOO SLOW	Capstan rotary speed is too slow. In the capstan on mode, capstan FG is not detected for 5 seconds.	STOP
19	S REEL ROTATE TOO FAST	S-REEL Rotation speed became too high more than 2 seconds.	STOP
22	T-REEL ROTA TOO FAST	T-REEL Rotation speed became too high more than 2 seconds.	STOP
24	T-REEL TORQUE ERROR	In the Reel mode, exceed reel torque, caused by tape run over load, is detected. If the T Reel Torque error voltage is more than 0.5V continuously, goes to Auto Off mode within 105 seconds.	STOP
25	S-REEL TORQUE ERROR	In the Reel mode, exceed reel torque, caused by tape run over load, is detected. If the S Reel Torque error voltage is more than 0.5V continuously, goes to Auto off mode within 105 seconds or Over current flow to Reel Motor more than 0.55A for 2 seconds.	STOP
26	CAP Tension Error	Tension error is detected in capstan mode. Tension sensor voltage (SERVO : TP201) is more than 4.7 V or less than 0.3 V for 2 seconds.	STOP
27	REEL Tension Error	Tension error is detected in Reel mode. Tension sensor voltage (SERVO : TP201) is more than 4.7 V or less than 0.3 V for 2 seconds.	STOP
28	REEL DIR UNMATCH	Take up Reel direction error is detected. Rotation of Take-up reel in opposite direction has continued through complete turn except speed 0 (stop)	STOP
40	DEW	If the condensation has formed inside the VTR, [Auto Off] LED turns on and the message flushes, then VTR goes to Eject mode. <Reset Condition> After the cassette is ejected, Drum rotated to dry out the condensation. When condensation has been removed, message is cleaned and normal operation is enable. NOTE: 1, Drum rotated, when the condensation is detected inside the VTR. 2, If the condensation is detected, when insert the cassette to VTR.	EJECT

41	E-FF	The tape beginning and end position are detected simultaneously during loading or after loading completed mode.	STOP

*** Other Operation.**

1. If the Reel Base unit does not move to prescribed position within 3 seconds, Reel Motor goes to stop and the cassette is ejected.

2.8. AUTO OFF Check Point Table

Message	Check Point	
WINDUP_REEL_NOT_ROTA	Check the loosen of the tape before power on. ● S Reel side before capstan motor → S Reel side is abnormal at REV mode. ● T Reel side after capstan motor → T Reel side is abnormal at FWD mode	1. Check the Torque Offset (Front Rear S ON) [In case of ab ● Check loo Mech I/F boar ● Check Ser Motor Drive ci TRH~1,2,3, SH TRM1,2,3, SR ● Check Ree Replace Reel 2.Check Reel (Check the Re Reel Torque C [In case of ab ● Check loo Mech I/F boar ● Check Sys Solenoid Driv S_BRAKE_N, 3. Grease is n

WINDUP_ERROR		**1. Check the t ● Check Spr of Tension Re ● Check Ten Voltage Chec Refer to the T 2. Check the Capstan FG — Capstan FG C Reel FG — Re Check 2 3. Check Reel Torque Offset 4. Check Tape 5. Check Tape**
UNLOAD_ERROR	**Check the tape is surely wound.**	**1. Check dead Torque Offset (Front Rear S ON) [In case of ab ● Check loo Mech I/F boar Check Motor TRH~1,2,3, S TRM1,2,3, SR ● Check Ree Replace Reel 2. Check Reel [In case of ab Re-adjustmen 3. Check Reel (Check the Re Reel Torque [In case of ab ● Check loo Mech I/F boar ● Check Sys Solenoid Driv S_BRAKE_N, 4. Check Reel Reel FG — Re Check 2**

S_FF/REW_TIMEOVER	**Check the problem occurred at tape beginning or tape, or other portion.**	**1. Check Reel Reel FG — Re Check 2 [In case of ab ● Check loo Mech I/F boar ● Reel FG S ● Check F1 2. Check tran [In case of ab ● Check loo Mech I/F boar ● Replace s ● Check F2 3. Check the**
S_REEL_ROTA_TOO_FAST		**1. Check Reel Reel FG — Re Check 2 [In case of ab ● Check loo Mech I/F boar ● Reel FG S ● Check F1 2. Check Reel TP450 and TP**
T_REEL_ROTA_TOO_FAST		**1. Check Reel Reel FG — Re Check 2 [In case of ab ● Check loo Mech I/F boar ● Reel FG S ● Check F1 2. Check Reel TP450 and TP**

T_REEL_TORQUE_ERROR		**1. Check Reel [In case of ab Re-adjustmen 2. Check Reel (Check the Re Reel Torque C [In case of ab ● Check loo Mech I/F boar ● Check Sys Solenoid Driv S_BRAKE_N,**
S_REEL_TORQUE_ERROR		**1. Check Reel [In case of ab Re-adjustmen 2. Check Reel (Check the Re Reel Torque C [In case of ab ● Check loo Mech I/F boar ● Check Sys Solenoid Driv S_BRAKE_N,**
DRUM_ROTATE_TOO_FAST		**Check Cylind Check Cylind [In case of fas ● Check Cyl ● Check CY Normal Rotati During Full Ac EJECT mode Servo REF (IC If above volta correct. [In case of FG PG signal flo Mother >> Se**

DRUM_ROTATE_TOO_SLOW	**Check that the tape is stick with the Cylinder.** **Check that the tape is stick with a part of the tape pass and it causes the high tension. In this case tape may brake the Cylinder rotation.**	**Check Cylinde** **Check Cylinde** **[In case of FG** **PG signal flov** **Mother >> Ser** **[In case of bot** **rotation is act** **(1). Check Cyl** **Rotate the Cyl** **Check that the** **smooth, the C** **(2). Check the** **Check that the** **pulse which is** **50 %, 0V/5V.** **If it is incorrec** **(3). Check the** **command.** **● Check that** **is output at C** **● Check that** **pin. when it is** **(4). Check the** **Check that SE** **about 2.5 V.** **→ If (3) or (4)** **/A is incorrect** **(5). Check tha** **Check that Dr** **and Motor Dri** **The VM is pos** **→ If it is corr** **is incorrect.** **Check conne**

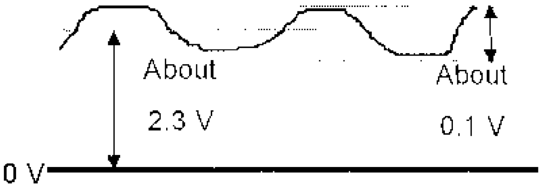
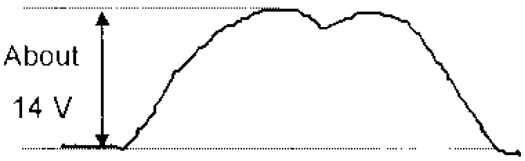
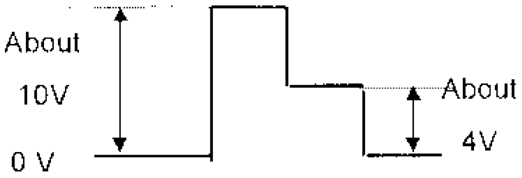
CAP_ROTATE_TOO_SLOW	**Check the tape is not stacked with the tape pass and tension is not high.** **Check the mechanical load of Capstan.**	**Refer to Caps** ● **In case of** **the message i** **The FG signal** **speed is not s** **frequency at C** **with the rotar** **PB mode).** **Check the cor** **Mother.** ● **In case of** **(1). Check the** **command.** **Check the SEI** **Check the CA** **command. It i** **the capstan d** **should be 0 V** **Check Drive C** **and 0 V (fwd),** **(2). Check the** **Check the Dri** **27 pin).** **Check Motor I** **pin).** **(3). Check the** **motor.** **Check the cor** **Mother.** **If above condi** **circuit is inco**
Fig 1 **REEL Position Detect**		**Rotate the RE** **the following** **F1 board** **P2 - 10a TRH1** **10b TRH1-** **10c TRH2+** **11a TRH2-** **11b TRH3+** **11c TRH3-** **12c SRH1+** **13a SRH1-** **13b SRH2+** **13c SRH2-** **14a SRH3+** **14b SRH3-**

Fig2 **REEL Drive Waveform**		Set Front Rea Select T or S_ the REEL and Fig. 2. F1 board P2-2 23c TRM1 24c TRM2 25b SRM3 25c SRM1 26c SRM2
Fig. 3 **Brake Solenoid**		Set Front Rea Select T or S_ the waveform positions at B ● T_REEL_T F2 board P2 - ● S_REEL_T F2 board P2 -

3. Maintenance/Disassembly Procedures & Mechanical Adjustment

3.1. Maintenance

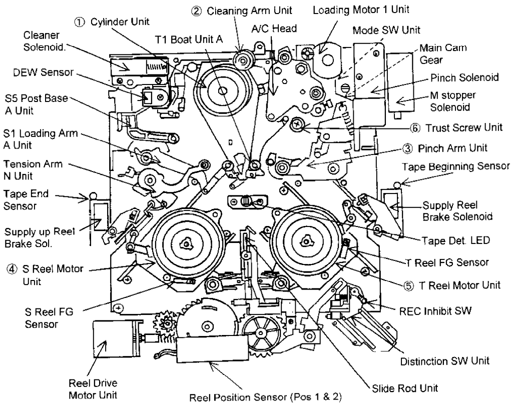
3.1.1. Maintenance Part Chart

No	Name	Part Number	Part Using Hours (Unit hours)				
			2,000	4,000	6,000	8,000	10,000
.	Tape Path Cleaning		[C]Clean the Tape Path at each 500 hour				
1	Cylinder Unit	VEG1337	R	R	R	R	R
2	Cleaning Arm Unit	VXL2748	R	R	R	R	R
3	Pinch Arm Unit	VXL2835		RG		RG	
4	S Reel Motor Unit	VEM0686			R		
5	T Reel Motor Unit	VEM0687			R		
6	Thrust Screw Unit	VXQ0556			RL		
7	Front Loading Unit	VXA6070					
8	Mech. Chassis Unit	VXY1431Z1					
9	Fan Motor	VRF0190	Replace the Fan Motor at each 10,000 hours Op Time				

Note:
Using hours are based on the head rotation hours.
Using hours are recommendation. It may depended on temperature, humidity or dusty.
Using hours are listed as the reference of maintenance. They do not mean guarantee Hours.

Symbol	Maintenance	Remark
R	Replacement	
r	Replacement	These parts are included in Mech Chassis Unit
G	Greasing	Wipe the old grease and apply new grease
[C]	Cleaning	This mark means cleaning is necessary
L	Lubrication	The lubrication is necessary

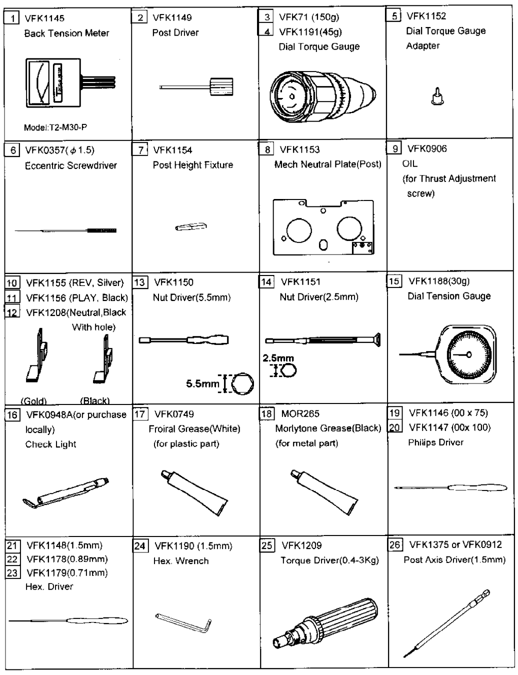
3.1.2. Sensors Layout


① Cylinder Unit
② Cleaning Arm Unit
Loading Motor 1 Unit
A/C Head
Mode SW Unit
T1 Boat Unit A
Cleaner Solenoid.
Main Cam Gear
DEW Sensor
Pinch Solenoid
S5 Post Base A Unit
M stopper Solenoid
⑥ Trust Screw Unit
S1 Loading Arm A Unit
③ Pinch Arm Unit
Tension Arm N Unit
Tape Beginning Sensor
Tape End Sensor
Supply Reel Brake Solenoid
Supply up Reel Brake Sol.
Tape Det. LED
T Reel FG Sensor
④ S Reel Motor Unit
⑤ T Reel Motor Unit
S Reel FG Sensor
REC Inhibit SW
Distinction SW Unit
Reel Drive Motor Unit
Slide Rod Unit
Reel Position Sensor (Pos 1 & 2)

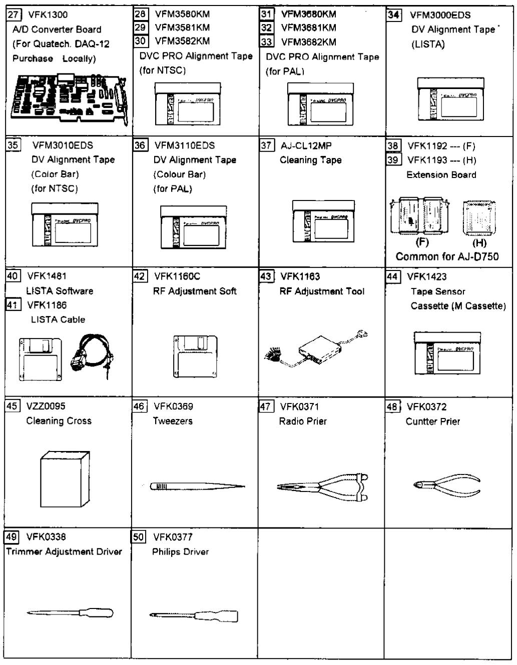
3.1.3. Servicing Fixtures & Tools

No.	Part No.	Name	AJ-D850	Remark
1	VFK1145	Back Tension Meter (T2-M30-P)	Use	
2	VFK1149	Post Driver	Use	
3	VFK71	Dial Torque Gauge (150 g)	Use	
4	VFK1191	Dial Torque Gauge (45g)	Use	
5	VFK1152	Dial Torque Gauge Adapter	Use	
6	VFK0357	Eccentric Screwdriver (1.5)	Use	
7	VFK1154	Post Height Fixture	Use	
8	VFK1153	Mech. Neutral Plate(Post)	Use	
9	VFK0906	Oil	Use	
10	VFK1155	REV Position Tool (Silver color)	Use	
11	VFK1156	PLAY Position Tool (Black color)	Use	
12	VFK1208	Neutral Position tool (Black with hole)	Use	
13	VFK1150	Nut Driver (5.5mm)	Use	
14	VFK1151	Nut Driver (2.5mm)	Use	
15	VFK1188	Dial Tension Gauge (30g)	Use	
16	VFK0948A	Check Light	Use	
17	VFK0749	Froiral Grease (White: for plastic part)	Use	
18	M0R265	Morlytone Grease (Black: for metal part)	Use	
19	VFK1146	Philips Driver (00-75)	Use	
20	VFK1147	Philips Driver (00-100)	Use	

21	**VFK1148**	**Hex. Driver (1.5mm)**	**Use**	
22	**VFK1178**	**Hex. Driver (0.89mm)**	**Use**	
23	**VFK1179**	**Hex. Driver (0.71mm)**	**Use**	
24	**VFK1190**	**Hex. Wrench (1.5mm)**	**Use**	
25	**VFK1209**	**Torque Driver(0.4-3Kg)**	**Use**	
26	**VFK1375**	**Post Axis Driver(1.5mm)**	**Use**	**or VFK0912**
27	**VFK1300**	**A/D Converter Board (DAQ-12 Quatech)**	**Use**	**Purchase Locally**
28	**VFM3580KM**	**Alignment Tape (No.1)**	**Use**	**for NTSC**
29	**VFM3581KM**	**Alignment Tape (No.2)**	**Use**	**for NTSC**
30	**VFM3582KM**	**Alignment Tape (No.3)**	**Use**	
31	**VFM3680KM**	**Alignment Tape (No.1)**	**Use**	**for PAL**
32	**VFM3681KM**	**Alignment Tape (No.2)**	**Use**	**for PAL**
33	**VFM3682KM**	**Alignment Tape (No.3)**	**Use**	**for PAL**
34	**VFM3000EDS**	**Alignment Tape (DV LISTA)**	**Use**	
35	**VFM3010EDS**	**Alignment Tape (DV Color Bar)**	**Use**	**for NTSC**
36	**VFM3010EDS**	**Alignment Tape (DV Colour Bar)**	**Use**	**for PAL**
37	**AJ-CL12MP**	**Cleaning Tape**	**Use**	
38	**VFK1192**	**Extension Board (F)**	**Use**	
39	**VFK1193**	**Extension Board (H)**	**Use**	
40	**VFK1481**	**LISTA Software**	**Use**	
41	**VFK1186**	**LISTA Cable**	**Use**	
42	**VFK1160C**	**RF Adjustment Software**	**Use**	
43	**VFK1163**	**RF Adjustment Tape**	**Use**	
44	**VFK1423**	**Tape Det. Sensor Cassette**	**Use**	
45	**VZZ0095**	**Cleaning Cross**	**Use**	
46	**VFK0369**	**Tweezers**	**Use**	
47	**VFK0371**	**Radio Prier**	**Use**	
48	**VFK0372**	**Cutter Prier**	**Use**	
49	**VFK0338**	**Trimmer Adjustment Driver**	**Use**	
50	**VFK0337**	**Philips Driver**	**Use**	

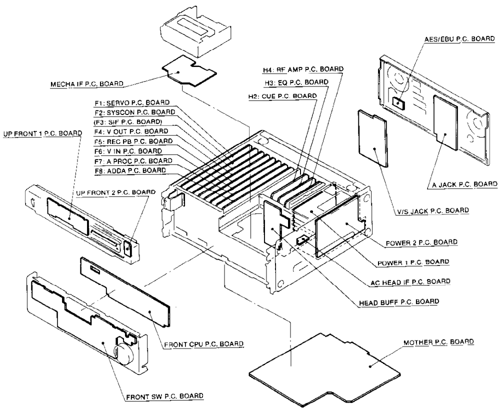


1 VFK1145 Back Tension Meter Model:T2-M30-P	2 VFK1149 Post Driver	3 VFK71 (150g) 4 VFK1191(45g) Dial Torque Gauge	5 VFK1152 Dial Torque Gauge Adapter
6 VFK0357(φ1.5) Eccentric Screwdriver	7 VFK1154 Post Height Fixture	8 VFK1153 Mech Neutral Plate(Post)	9 VFK0906 OIL (for Thrust Adjustment screw)
10 VFK1155 (REV, Silver) 11 VFK1156 (PLAY, Black) 12 VFK1208(Neutral,Black With hole) (Gold) (Black)	13 VFK1150 Nut Driver(5.5mm) 5.5mm	14 VFK1151 Nut Driver(2.5mm) 2.5mm	15 VFK1188(30g) Dial Tension Gauge
16 VFK0948A(or purchase locally) Check Light	17 VFK0749 Froiral Grease(White) (for plastic part)	18 MOR265 Morlytone Grease(Black) (for metal part)	19 VFK1146 (00 x 75) 20 VFK1147 (00x 100) Philips Driver
21 VFK1148(1.5mm) 22 VFK1178(0.89mm) 23 VFK1179(0.71mm) Hex. Driver	24 VFK1190 (1.5mm) Hex. Wrench	25 VFK1209 Torque Driver(0.4-3Kg)	26 VFK1375 or VFK0912 Post Axis Driver(1.5mm)



27 VFK1300 A/D Converter Board (For Quatech. DAQ-12 Purchase Locally)	28 VFM3580KM 29 VFM3581KM 30 VFM3582KM DVC PRO Alignment Tape (for NTSC)	31 VFM3680KM 32 VFM3681KM 33 VFM3682KM DVC PRO Alignment Tape (for PAL)	34 VFM3000EDS DV Alignment Tape (LISTA)
35 VFM3010EDS DV Alignment Tape (Color Bar) (for NTSC)	36 VFM3110EDS DV Alignment Tape (Colour Bar) (for PAL)	37 AJ-CL12MP Cleaning Tape	38 VFK1192 --- (F) 39 VFK1193 --- (H) Extension Board (F) (H) Common for AJ-D750
40 VFK1481 LISTA Software 41 VFK1186 LISTA Cable	42 VFK1160C RF Adjustment Soft	43 VFK1163 RF Adjustment Tool	44 VFK1423 Tape Sensor Cassette (M Cassette)
45 VZZ0095 Cleaning Cross	46 VFK0369 Tweezers	47 VFK0371 Radio Prier	48 VFK0372 Cuntter Prier
49 VFK0338 Trimmer Adjustment Driver	50 VFK0377 Philips Driver		

3.1.4. CIRCUIT BOARD LOCATION


AES/EBU P.C. BOARD
MECHA IF P.C. BOARD
H4: RF AMP P.C. BOARD
H3: EQ P.C. BOARD
H2: CUE P.C. BOARD
F1: SERVO P.C. BOARD
F2: SYSCON P.C. BOARD
(F3: SIF P.C. BOARD)
F4: V OUT P.C. BOARD
F5: REC PB P.C. BOARD
F6: V IN P.C. BOARD
F7: A PROC P.C. BOARD
F8: ADDA P.C. BOARD
UP FRONT 1 P.C. BOARD
UP FRONT 2 P.C. BOARD
A JACK P.C. BOARD
V/S JACK P.C. BOARD
POWER 2 P.C. BOARD
POWER 1 P.C. BOARD
AC HEAD IF P.C. BOARD
HEAD BUFF P.C. BOARD
FRONT CPU P.C. BOARD
MOTHER P.C. BOARD
FRONT SW P.C. BOARD

3.1.5. Alignment Tapes

DVCPRO Alignment Tape

VFM3580KM(NTSC)

Time	Video		PCM		CUE	
(min)	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar SMPTE(75%)	Composite Video Level Confirmation	1kHz -20dB	Audio Level Confirmation	1kHz 0VU	CUE Level Confirmation
7:00	Color Bar Full Field(75%)	Component Video Level Confirmation				
14:00	H Sweep	Frequency Response			6kHz 0VU	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse&Bar	Y/C Timing			-10dB, 1kHz 50Hz~15kHz	Frequency Response
26:00 30:00	Area Markers					

VFM3581KM(NTSC)

Time(min)	Signal
0:00~20:00	ITI Pattern

VFM3582KM(NTSC)

Time(min)	Signal
0:00~10:00	X Value

VFM3680KM (PAL)

Time	Video		PCM		CUE	
(min)	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar 100%	Video Level Confirmation	1kHz -18dBu	Audio Level Confirmation	1kHz Reference level	CUE Level Confirmation
10:00	H Sweep	Frequency Response				
14:00	Area Markers				6kHz Reference level	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse & Bar	Y/C Timing			1kHz 300Hz~6kHz	Frequency Response
26:00 30:00	Multi Pulse	Y/C Timing				

VFM3681KM (PAL)

Time (min)	Signal
0:00 ~ 20:00	ITI Pattern

VFM3682KM (PAL)

Time (min)	Signal
0:00 ~ 10:00	X Value

3.1.6. Recommended Test And Service Equipment

NTSC

Part No.	Name	Remark
TSG130A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1750,1760(OP.SC) or 1780R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz–500KHz
	Audio Analyzer	

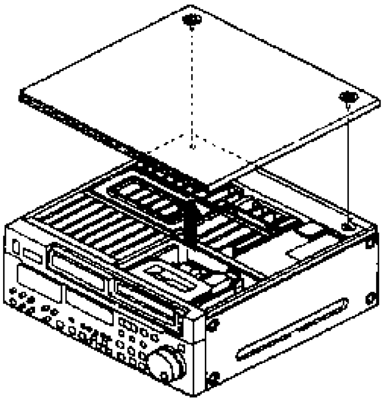
PAL

Part No.	Name	Remark
TSG131A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1751,1761(OP.SC) or 1781R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz–500KHz
	Audio Analyzer	

3.2. Disassembly Method

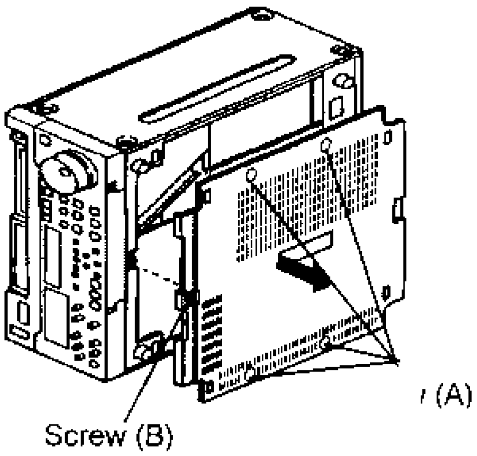
3.2.1. Removal of Top Panel

1. Loosen the two screws on the top panel.



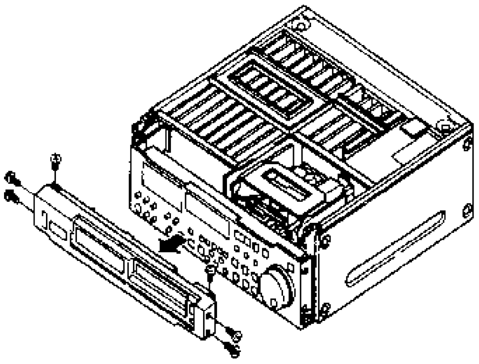
3.2.2. Removal of Bottom Panel

1. Unscrew the 4 screws (A) and loosen the screw (B).
2. Slide the bottom panel to front direction and remove the bottom panel.



3.2.3. Removal of Upper Front Panel

1. **Draw up the Front Panel and unscrew the 6 screws.**
2. **Remove the Upper Front Panel and disconnect the one connector.**

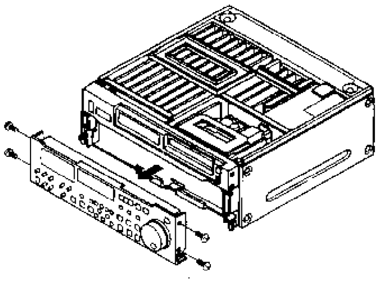


Note:

After installation of Upper Front Panel, confirm that the Blinder Panel is moved up and down smoothly by hand. If not, the Blinder Panel is caught by Blind Panel Opener.

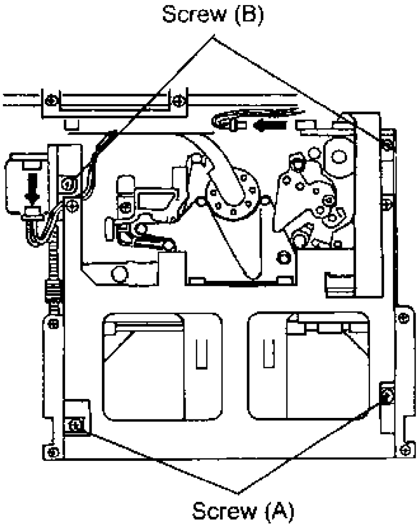
3.2.4. Removal of Front Panel

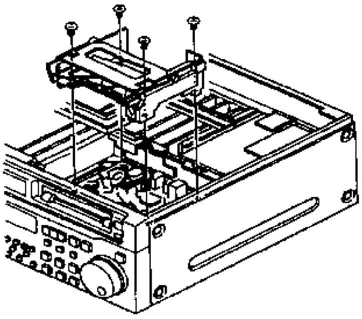
1. **Remove the Upper Front Panel.**
2. **Draw up the Front Panel and unscrew the 4 screws and disconnect one connector, then remove the Front Panel.**



3.2.5. Removal of Front Loading Unit

1. Move the Cassette Holder until the 2 screws (A) can be removal position.

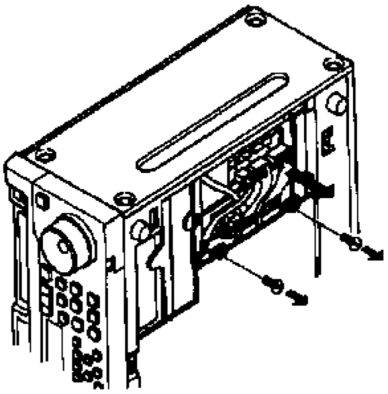




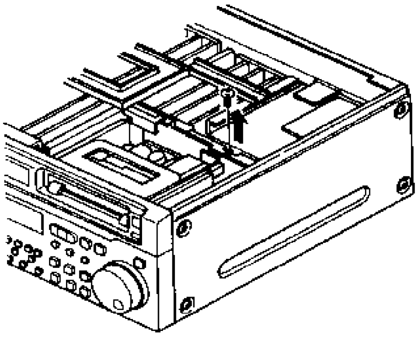
2. Disconnect 2 connectors at Front Loading motor part and the mechanism interconnection board.
3. Unscrew the 4 screws (A) and (B), then remove the Front Loading Unit.

3.2.6. Removal of Power Supply unit

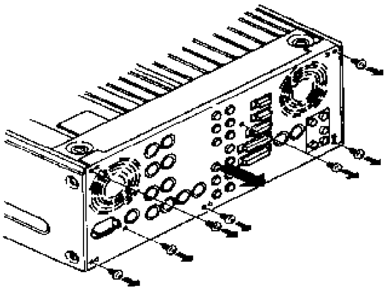
1. **Remove the Bottom Panel.**
2. **Disconnect the 5 connectors with the Power Supply unit at the VTR bottom side.**
3. **Unscrew the 2 screws with the Power Supply unit at the VTR bottom side.**



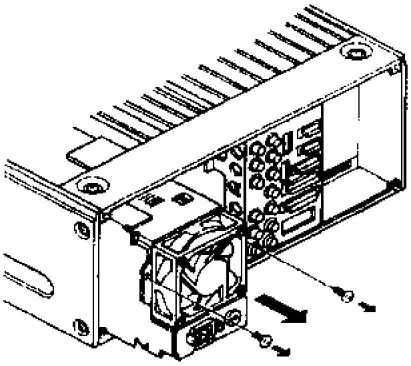
4. **Unscrew one screw with the Power Supply unit on the VTR top side.**



5. **Unscrew the 7 screws and remove the Rear Jack Panel.**

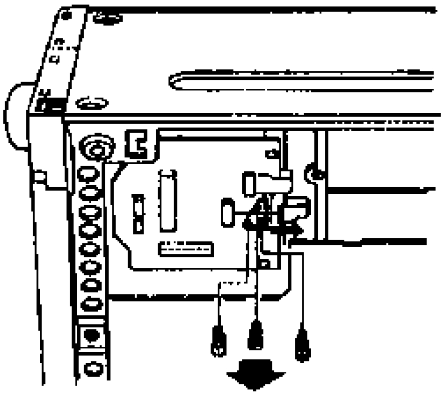


6. **Unscrew the 2 screws with the Power Supply unit at the VTR rear side, then Power Supply Unit can be removal..**



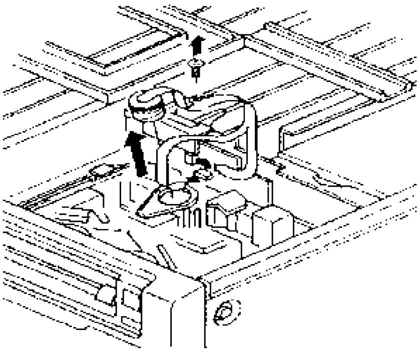
3.2.7. Removal of Cylinder Unit

1. Remove the Bottom Panel
2. Disconnect the connector P33 on the Mech. I/F Board. And remove the 3 screws which have spring from the cylinder unit..



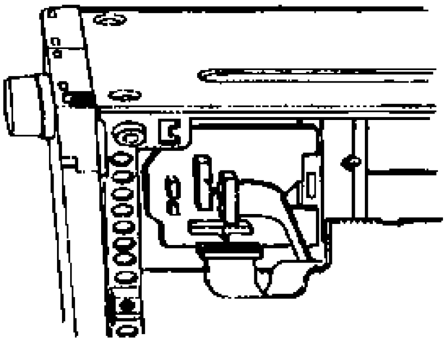
3. Remove the one screw which is fixed with the flexible cable, it attached Cylinder Unit..
4. Disconnect the connector P5002 and P5003 on the Head Buffer Board, then remove the cylinder unit without touching any mechanism parts.

- Assemble procedures are reverse of the disassembly method.

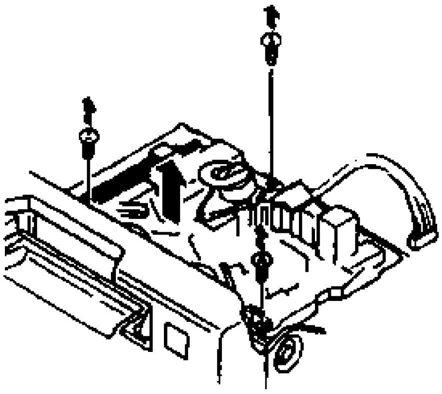


3.2.8. Removal of Mechanism Unit

1. **Remove the Front Loading unit.**
2. **Remove the Bottom Panel.**
3. **Disconnect the connector P1 and P2 on the Mech. I/F Board.**
4. **Disconnect the connector P1 on A/C Head I/F Board for remove the A/C Head cable.**

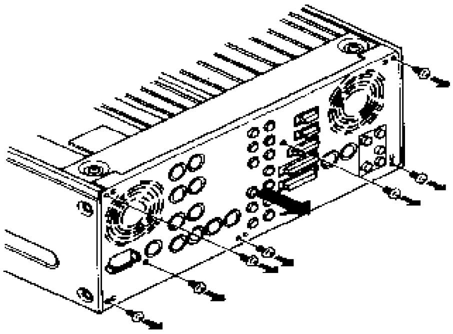


5. **Disconnect the connector P5002 and P5003 on the Head Buffer board.**
6. **Unscrew the 3 screws and remove the mechanism unit.**

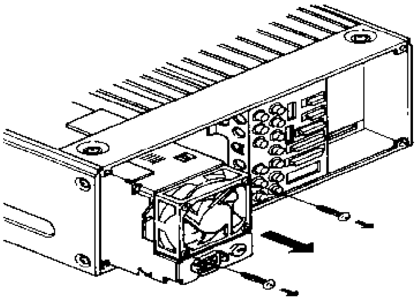


3.2.9. Removal of Fun Motor Unit

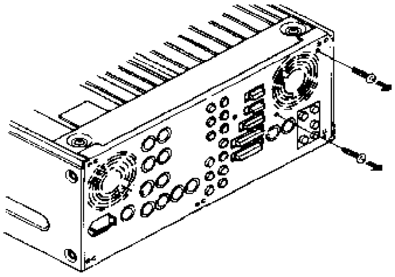
1. Unscrew the 7 screws and remove the Rear Jack Panel.



2. Unscrew the 2 screws and disconnect the connector P14 on the Power 2 P.C.B. ,then remove the Fan Motor as shown as below figure.



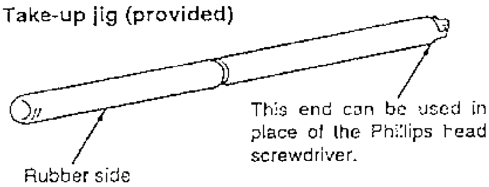
3. Unscrew the 2 screws and disconnect the connector P32 on Mother P.C.B. ,then remove the Fan Motor as shown as below figure.



3.3. Manual Tape Eject

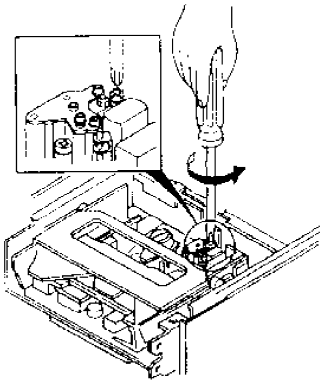
When a tape can not be ejected, because of Power failure or mechanical tape damage, remove the tape manually.

1. **Turns power off and remove the top Case Unit.**
2. **Rotate the red plastic screw by a Phillips — head screwdriver counterclockwise pushing the screw. It needs to rotate about 30 times rotation until starting to move.**
3. **Since tape slack will develop when the post is unloaded, wind up the supply reel to take up the slack.**
   How to take up the slack (see (3))
   A. **Insert the rubber side of the take-up jig into the cassette tape withdrawal opening on the VTR's mechanism side.**
   B. **Turn the flange part of the supply reel in the direction of take-up to take up the tape slack. (Take care not to damage the tape in the process.)**

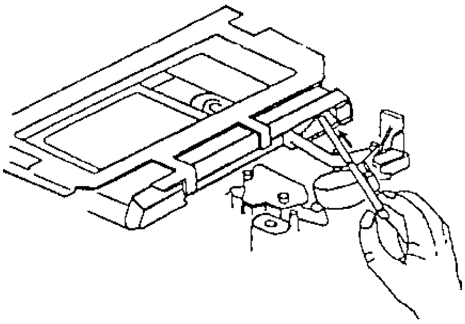

Take-up jig (provided)
This end can be used in place of the Phillips head screwdriver.
Rubber side

4. **Repeat item 2 and 3 until the tape in wound**
   Completely inside of the cassette.
5. **When the tape is completely inside of the cassette, rotate the red screw in front of the worm gear of the cassette down motor clockwise by a Philips-head screwdriver pusing the screw and remove the cassette cover does not bite the tape when the cover is closed.**

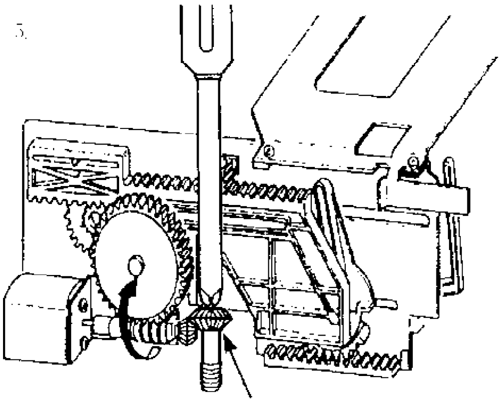
2



3



5.



Rotate the Red Screw

3.4. Cleaning Procedures

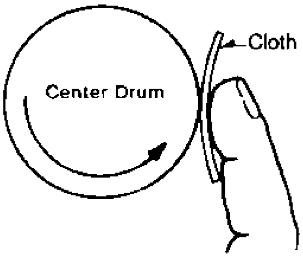
Note:

Turns power off during cleaning.

Make sure the power is OFF before cleaning. Use ethanol(more than 99% purity) as cleaning liquid.

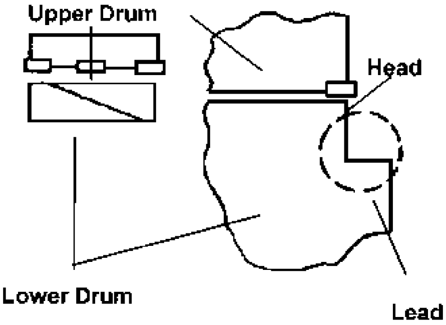
3.4.1. Cleaning of Head Chips: (Daily)

Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion. Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.



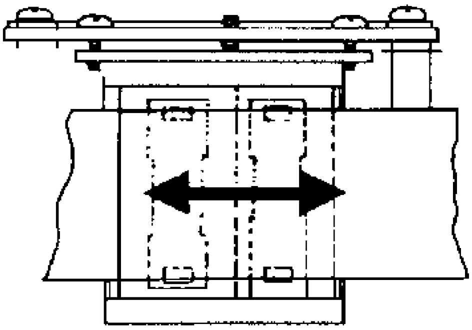
3.4.2. Cleaning of Drum Lead: (Weekly)

Be careful not to touch a head chip. Clean the drum lead with a pick.



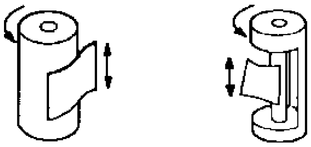
3.4.3. Cleaning of A/C Head: (Weekly)

Wipe the A/C head with a cloth soaked by cleaning liquid. Wipe again with a dry cloth.



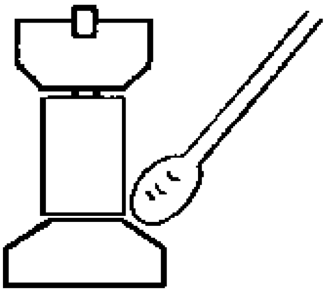
3.4.4. Cleaning of Pinch Roller and Capstan: (Weekly)

Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.



3.4.5. Cleaning of Post :(Weekly)

Wind a cloth on a pick. Wipe each post dry with that pick . Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.

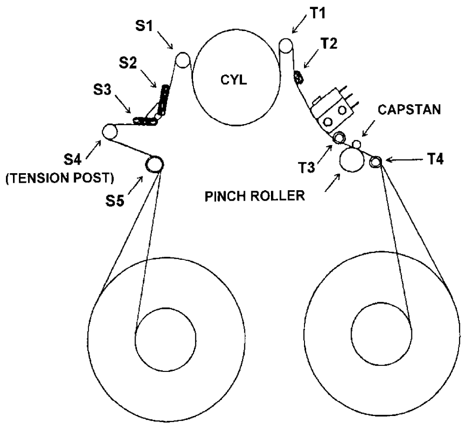


Note:

Use the clean cloth for cleaning purpose. Do not use any dirty cloth.
The Cleaning Cloth can be ordered as spare part. The part number indicated as below.
CLEANING CLOTH : VZZ0095

3.5. Mechanical Adjustment

3.5.1. Name of tape transportation

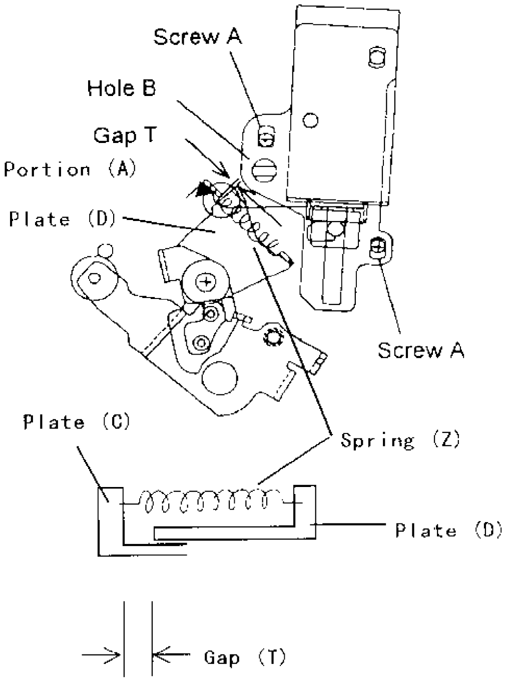


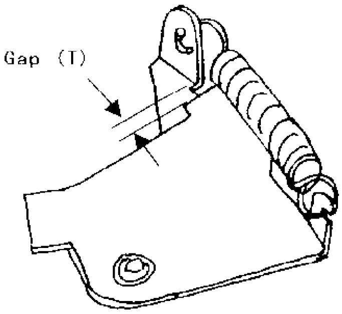
3.5.2. Pinch Solenoid Position Adjustment

SPEC.	T = 0.3mm
TEST POINT	Gap T
ADJUSTMENT	Screw(A), Hole(B)
MODE	EJECT(Power OFF)
TOOL	VFK0357(Eccentric Driver)

1. **Confirm the power of condition at VTR.**
2. **Push the pinch roller by hand to be close to capstan.**
3. **Push the pinch solenoid by hand so that the pinch roller contacts capstan.**
4. **Loosen the two screws (A) and adjust the hole (B) by VFK0357 so that gap (T) is within specification.**

5. The position for confirm Gap, which is located spring scratch to Plate (C) side.


Screw A
Hole B
Gap T
Portion (A)
Plate (D)
Screw A
Plate (C)
Spring (Z)
Plate (D)
Gap (T)

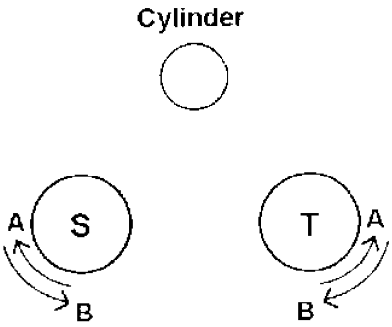


3.5.3. Main Brake Torque Confirmation

SPEC	Direction A : more than 80g Direction B : more than 15g
TEST POINT	S reel, T Reel
MODE	EJECT(POWER OFF)
TOOL	VFK71(150g), VFK1191(45g), VFK1152

1. Remove the Cassette Up Unit.
2. Install the adapter(VFK1152) to the torque gauge (VFK71).

3. Put the torque gauge on S Reel and Turn the torque gauge to direction A until S Reel slips against brake.
4. Confirm the torque is within specification.
5. Put the torque gauge on T Reel and turn the torque gauge to direction A until T Reel slips against brake.
6. Confirm the torque is within specification
7. Install the adapter(VFK1152) to the torque gauge (VFK1191).
8. Put the torque gauge on S Reel and turn the torque gauge to direction B until S Reel slips against brake.
9. Confirm the torque is within specification.
10. Put the torque gauge on T Reel and turn the torque gauge to direction B until T Reel slips against brake.
11. Confirm the torque is within specification.



3.5.4. Post Height Pre-adjustment

MODE	EJECT(POWER OFF)
TOOL	VFK1153, VFK1154(Flange Tool)

1. Turn the power OFF and then set the tube* to cover the sensor LED and place the unit in no tape loading mode.

   Note:

   Make a tube* by yourself.
2. Install the Mech. Neutral Plate (VFK1153) and adjust each post height as shown in figure.
3. Adjust the each post to Lower limit by VFK1154 as shown in

figure.

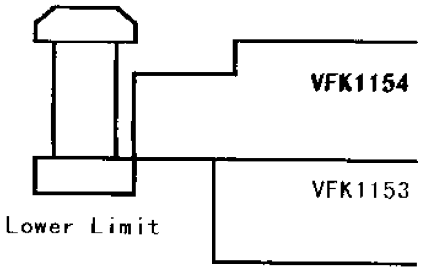
4. VFK1149 use for Post height adjustment of S4 and S5 post.
VFK1151 use for Post height adjustment of T3 and T4 post.

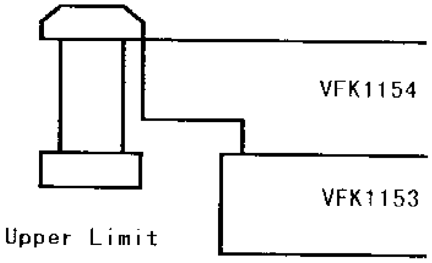
Post	Limit	Post Driver
S5 Post	Lower*	VFK1149
S4 Post	Lower*	VFK1149
T3 Post	Lower	VFK1151(2.5mm Nut Driver)
T4 Post	Lower	VFK1151(2.5mm Nut Driver)

Note:

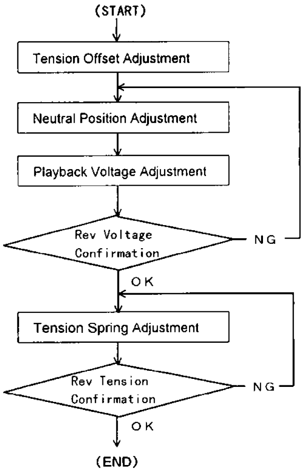
Lower* :

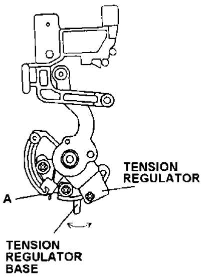
Turn S4 and S5 posts 1 round more counterclockwise from lower limit position.


VFK1154
VFK1153
Lower Limit


VFK1154
VFK1153
Upper Limit

3.5.5. Tension Adjustment Flowchart

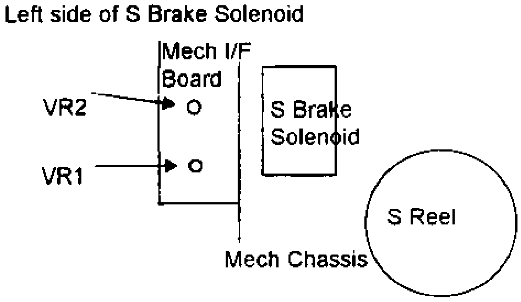

(START)
Tension Offset Adjustment
Neutral Position Adjustment
Playback Voltage Adjustment
Rev Voltage Confirmation
NG
OK
Tension Spring Adjustment
Rev Tension Confirmation
NG
OK
(END)


TENSION REGULATOR
A
TENSION REGULATOR BASE

3.5.6. Tension Offset Adjustment

BOARD	SERVO
SPEC	2.5±0.05V
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	VR1(MECH I/F)
MODE	EJECT
TOOL	Digital Volt Meter

1. **Adjust the VR1 so that the DC voltage at TP201 is within specification.**


Left side of S Brake Solenoid
Mech I/F Board
VR2
VR1
S Brake Solenoid
S Reel
Mech Chassis

3.5.7. Tension Arm Neutral Position Adjustment

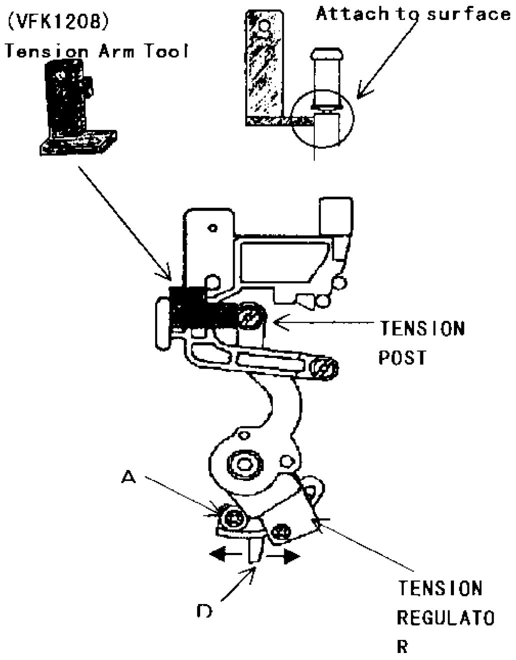
BOARD	SERVO
SPEC	2.5±0.1V
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	Base position of Tension Regulator Board
MODE	STOP
TOOL	Digital Volt Meter VFK1208 (Black,with hole)

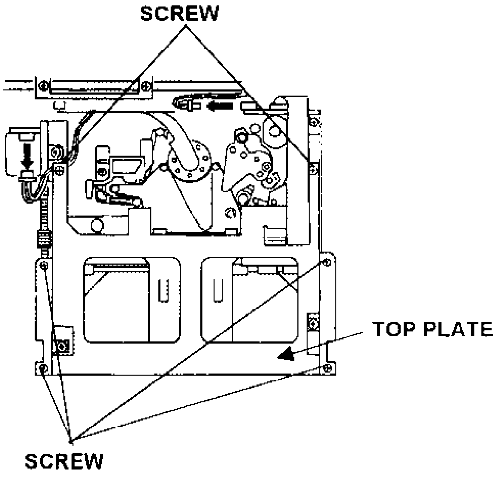
1. **Unscrew the 2 screws and remove the Carriage Support Panel on the Front Loading Unit.**
2. **Disconnect the connector P3 on the Carriage Board of the Front Loading Unit..**
3. **Unscrew the 6 screws and remove the Top Plate on the Front Loading Unit.**
4. **Install the VFK1208(black with hole) as shown in figure**
5. **Connect the Digital Volt Meter to Test point.**
6. **Place the unit into the no tape loading mode(Refer to No tape loading mode procedure as mentioned as below.**
7. **Loosen the screw (A) and move the lever (D) with tweezers for adjust the sensor position so that the DC voltage at TP201 is within specification.**

[No tape loading procedures]
Open the SERVO ADJUST menu on the Service Menu. Select the "T REEL TRQ" by cursor key and press SEARCH button on the Front Panel, then loading is started. During adjustment, hold the SEARCH button.

CAUTION:

1. **Do not use magnetized tweezers and Screw driver.**
2. **Do not touch the magnetize Screw driver to S-Reel FG magnet portion, when the lever (D) portion is adjusting.**

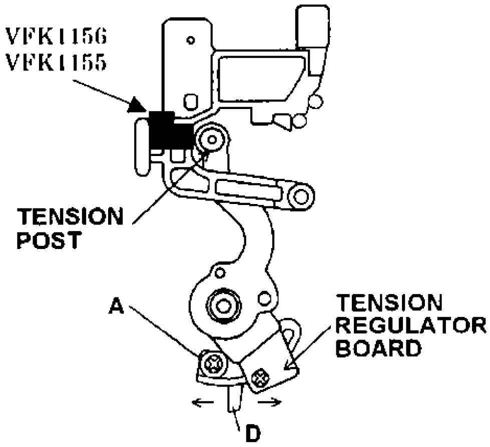

(VFK1208)
Tension Arm Tool
Attach to surface
TENSION POST
A
D
TENSION REGULATO R


SCREW
TOP PLATE
SCREW

3.5.8. Tension Arm PLAY and REV voltage adjustment

BOARD	**SERVO**
SPEC	**(PLAY) 3.8±0.05V** **(REV) 1.2±0.3V**
TEST POINT	**TP201(SERVO:F1)**
ADJUSTMENT	**VR2(Mech I/F)**
MODE	**STOP**
TOOL	**Digital Volt Meter** **VFK1156(Black:for PLAY position)** **VFK1155(White:for REV position)**

1. Install the VFK1156(black) as shown in figure.
2. Connect the Digital Volt Meter to Test point.
3. Place the unit into no tape loading mode.
4. Adjust the VR2 so that the DC voltage at TP201 is within specification (PLAY).
5. Install the VFK1155 as shown in figure and confirm that the DC voltage at TP201 is within specification (REV).
6. If it out of spec, perform the Neutral Position adjustment again.

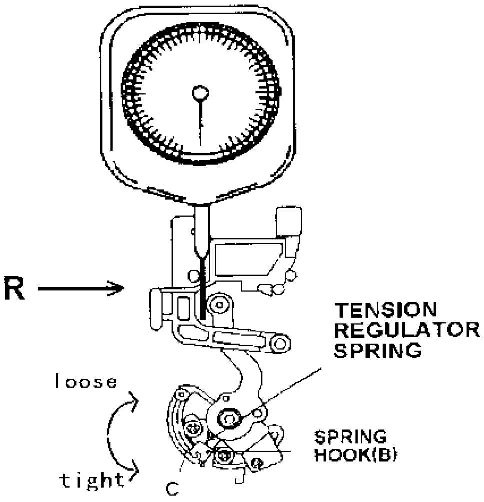


3.5.9. Tension Regulator Spring Adjustment

BOARD	SERVO
SPEC	11±1gf
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	Tension Regulator Spring hook (B)
MODE	STOP
TOOL	Digital Volt Meter VFK1188(30g Dial Tension Gauge)

1. Connect the Digital Volt Meter to Test point.
2. Place the VTR into no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP201 is 3.8V (PLAY position)
4. Loosen the screw (C) and adjust the position of hook (B) so that

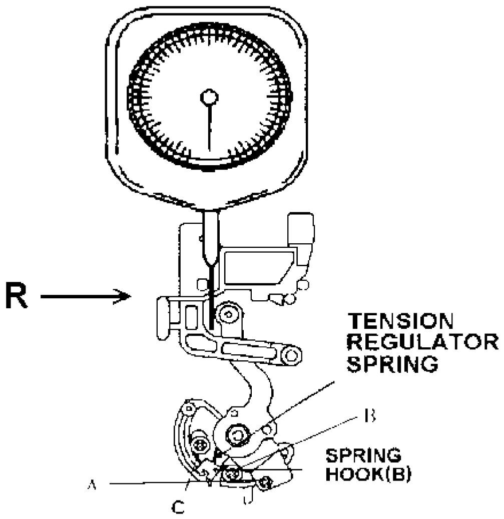
the indication of gauge is within specification..



3.5.10. REV Tension Confirmation

BOARD	SERVO
SPEC.	18±2gf
TEST POINT	TP201(SERVO:F1)
MODE	STOP
M.EQ	Digital Volt Meter VFK1188(30g Dial Tension Gauge)

1. **Connect the Digital Volt Meter to Test point.**
2. **Place the VTR into no tape loading mode.**
3. **Insert the tension gauge to push the tension post to the direction R until the voltage at the TP201 is 1.2V (REV position)**
4. **Confirm that the indication of gauge is within specification. If not, make the Tension Spring Adjustment again.**
5. **After finish this adjustment , grew the screw A,B and C . The grew quantity at B is half of A and C.**

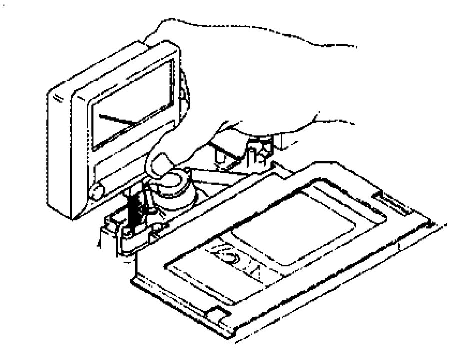


3.5.11. Tension Confirmation

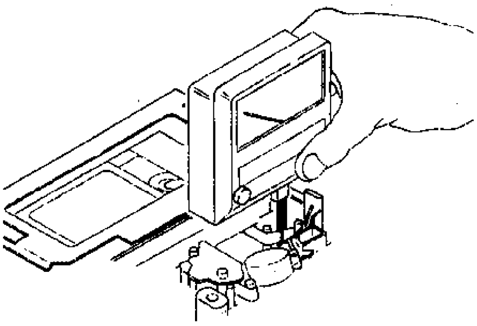
SPEC	**(PLAY)6.0±1gf** **(REV) 9.0±2gf**
MODE	**PLAY, REV×1**
TAPE	**63 min M size Blank Tape**
TOOL	**VFK1145(Tension Meter)**

1. **Play back beginning portion of the tape.**
2. **Insert the tension meter between S3 post and S4 post.(Refer to figure).**
3. **Confirm the tension is within specification.**
4. **Place the unit in REV mode.**
5. **Insert the tension meter between S4 post and S5 post.(Refer to figure)**
6. **Confirm the tension is within specification.**

Note:
Be careful not to give some tape damage.

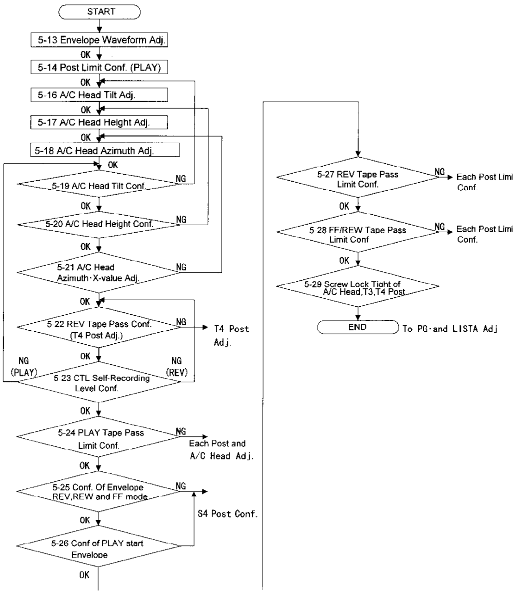


Play Tension



Rev Tension

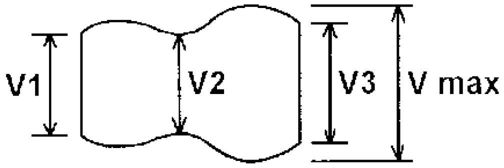
3.5.12. Tape Pass Adjustment Procedure


START
5-13 Envelope Waveform Adj.
OK
5-14 Post Limit Conf. (PLAY)
OK
5-16 A/C Head Tilt Adj.
OK
5-17 A/C Head Height Adj.
OK
5-18 A/C Head Azimuth Adj.
OK
5-19 A/C Head Tilt Conf.
NG
OK
5-20 A/C Head Height Conf.
NG
OK
5-21 A/C Head Azimuth·X-value Adj.
NG
OK
5-22 REV Tape Pass Conf. (T4 Post Adj.)
NG
T4 Post Adj.
OK
NG (PLAY)
NG (REV)
5-23 CTL Self-Recording Level Conf.
OK
5-24 PLAY Tape Pass Limit Conf.
NG
Each Post and A/C Head Adj.
OK
5-25 Conf. Of Envelope REV,REW and FF mode
NG
S4 Post Conf.
OK
5-26 Conf of PLAY start Envelope
OK
5-27 REV Tape Pass Limit Conf.
NG
Each Post Limi Conf.
OK
5-28 FF/REW Tape Pass Limit Conf
NG
Each Post Limi Conf.
OK
5-29 Screw Lock Tight of A/C Head,T3,T4 Post
END
To PG·and LISTA Adj

3.5.13. Envelope Waveform Adjustment

SPEC	V1/Vmax,V2/Vmax,V3/Vmax ≥ 0.8
TEST POINT	TP16:R/P ENV (RF AMP Board:H4) TP1 :TRIG/HSW (RF AMP Board: H4)
ADJUSTMENT	S1,T1 Post Height
MODE	PLAY(ATF)
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Oscilloscope
TOOL	VFK1149(Post Driver)

1. Playback the alignment tape.
2. Adjust S1 and T1 post height so that the R/P envelope output is within the specification.
3. When the S1 and T1 posts are adjusted, first raise the post height and make small the entrance and exit side of the envelope, then down the post until envelope becomes flat.
4. With order to adjustment, basically adjust T1 post for makes flat at exit side of envelope first and adjust S1 post.
5. After finish this adjustment, unload the tape and load the tape again, then confirm the shape of Envelope waveform does not changed.

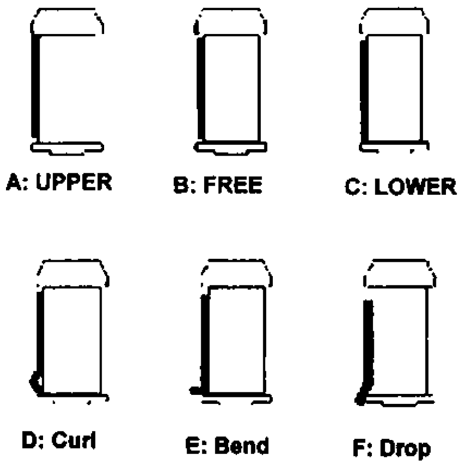


3.5.14. Post Limit Confirmation (PLAY)

SPEC	Post limit shown in the table No tape curl
MODE	PLAY
TAPE	Blank Tape
TOOL	VFK1149(Post Driver) VFK1151(Nut Driver)

1. **Confirm that the tape pass limit follow the as shown as below table and adjust it in case of need.**
2. **Confirm that the kinds of D,E and F condition do not appeared on the tape as shown in figure.**

Post	Limit	Adjustment
S5	Lower limit or Free	S5 Post Height
S4	Lower Limit	S4 Post Height
S1	Upper Limit	Envelope waveform
T1	Upper Limit	Envelope waveform
T3	Lower Limit	T3 Post Height
T4	Lower limit or Free	T4 Post Height



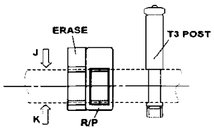
3.5.15. A/C Head Adjustment Method

Adjustment Item	SCREW	Adjustment Method	Torque
Tilt adjustment	A	Tighten direction…Decrease CUE Loosen direction…Increase CUE	
Height adjustment	B	Tighten direction…In case of increase CTL, when A/C Head Press down. Loosen direction…In case of increase CTL, when A/C Head lift up.	
Azimuth adjustment	F	Phase is adjusted by screw F	
X-value adjustment	C D	Adjust X-value by VFK0357 at Hole (E), then tighten the screw (C) and (D) to fix A/C Head horizontal position.	2.5Kg.cm
Fixed Tilt and Azimuth	G	Screw (G) is always tighten during adjustment except Tilt and Azimuth.	1.0Kg.cm
Fixed height	H	After height adjustment, tighten the screw (H) to fix height of A/C Head.	

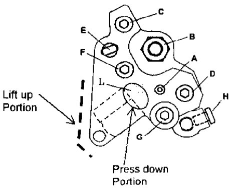
SCREW	Tool for adjustment
A	VFK1178 (0.89mm Hex Driver)
B	VFK1150 (5.5mm Tool for adjustment)
F	VFK1148 (1.5mm Hex Driver)
C,D,G	VFK1209 (Torque Driver) VFK1375 (1.5mm Post Axis Driver)
H	VFK1190 (1.5mm L type of Hex Wrench)

1. **Each adjustment of A/C Head should be perform under the screw (G) tightened.**
2. **Confirm the screw (A) does not loosen, before execute the A/C Head Tilt adjustment. The screw (A) should be always touch to top of A/C Head.**
3. **Be careful the tape damage at T3 Post, when adjust tilt of A/C Head.**
4. **When the height of A/C Head is adjusted by Nut (B), first the screw (H) should be loosen. And after height adjustment finished, tighten the screw (H) lightly.**
5. **Each adjustment of A/C Head should be finished at the condition of turn the each adjustment screw tighten direction. And hit the portion (L) lightly for remove the distortion.**
6. **Adjust alternately each A/C Head adjustment with Envelope**

Waveform adjustment.



A/C HEAD HEIGHT



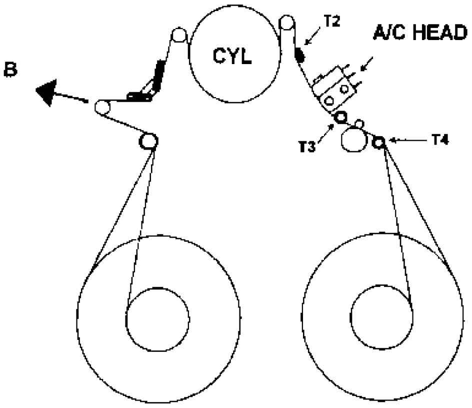
3.5.16. A/C Head Tilt Adjustment

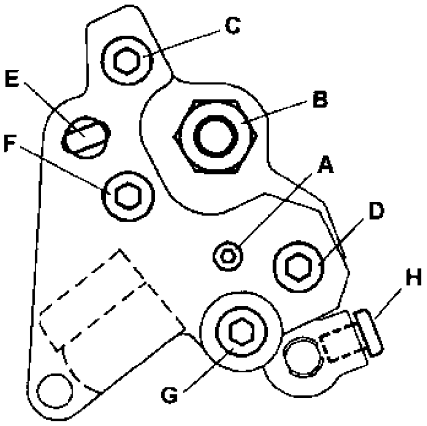
SPEC	Lower limit at T3 Post No tape curl
ADJUSTMENT	SCREW A and G (A/C Head)
MODE	PLAY
TAPE	Blank Tape
M.EQ	VFK1148,VFK1178(Hex Driver)

1. Play back the tape and adjust screw(A) for adjustment of tilt of A/C Head so that the tape path has lower limit without curl at T3 post.
2. To adjustment, loosen the screw (G) and make curl on tape at lower flange of T3 post by screw (A). And tighten screw (A) accordingly for find the point of curl disappeared. After finish adjustment for screw (A), tighten the screw (G) is tightened with 1.0Kg/cm of torque.

   Note:

   1. In case of turn clockwise screw (A).
      → Tape goes up at T3 post.
      In case of turn counter-clockwise screw (A).
      → Tape goes down at T3 post.
   2. When screw adjustment finished, with each adjustment screw on A/C Head should be finished tighten direction. And confirm that the screw does not loosen.
   3. Adjust and confirmation should be performed alternately with each A/C head adjustment(Azimuth and Height).





3.5.17. A/C Head Height adjustment

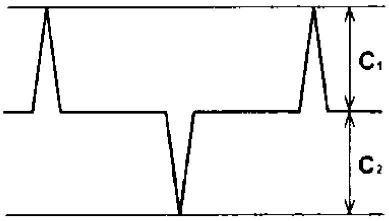
BOARD	SERVO
SPEC	CTL Output (C1,C2≥1.8V)
TEST POINT	TP30:CTL
ADJUSTMENT	SCREW B and H (A/C Head)
MODE	PLAY
TAPE	NTSC: VFM3580KM (14min to 22min) PAL: VFM3680KM (14min to 22min)
M.EQ	Oscilloscope
TOOL	VFK1150(Nut Driver) VFK1190(Hex Wrench)

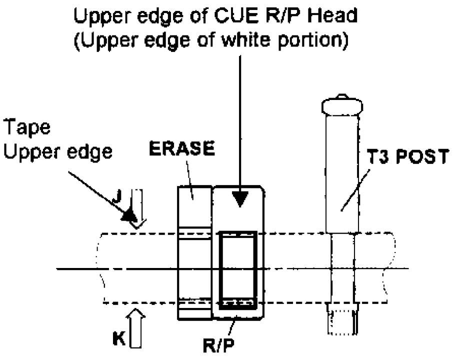
1. **Observe the CTL output (TP30) on the Servo board.**
2. **Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the CTL output level is decreased.**

3. **If increases CTL output, when press the A/C Head. Loosen the screw H and adjust the screw B counterclockwise until CTL output is maximized.**
4. **If increases CTL output, when lift up the A/C Head. Loosen the screw H and adjust the screw B clockwise until CTL output is maximized.**
5. **After tightening the screw H (2.0kg), confirm the level again.**

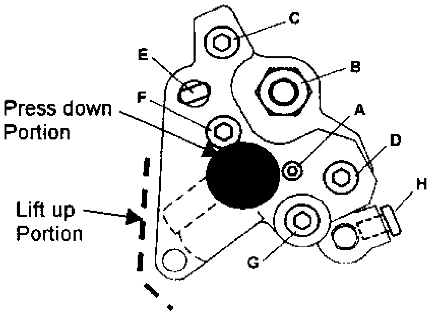
Note:

1. **Adjust alternately with other A/C head adjustments(Azimuth, Height).**




Upper edge of CUE R/P Head
(Upper edge of white portion)
Tape
Upper edge
ERASE
T3 POST
J
K
R/P

A/C HEAD HEIGHT


C
E
B
F
Press down
Portion
A
D
H
Lift up
Portion
G

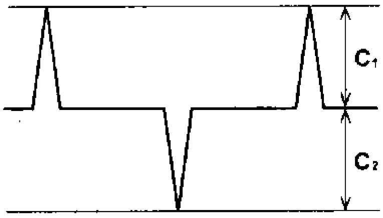
3.5.18. A/C Head Azimuth Adjustment

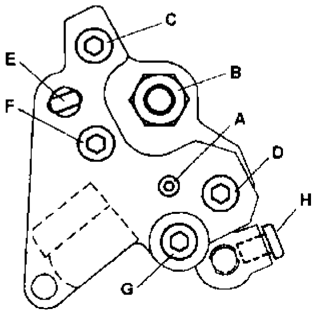
BOARD	SERVO
SPEC	CTL Output:C1,C2 = C1 max,C2 max
TEST POINT	TP30:CTL
ADJUSTMENT	SCREW F (A/C Head)
MODE	PLAY
TAPE	NTSC: VFM3580KM (14min to 22min) PAL: VFM3680KM (14min to 22mi)
M.EQ	Oscilloscope
TOOL	VFK1148(Hex Driver)

1. **Observe the CTL output (TP30) on the Servo Board.**
2. **To adjustment, loosen the screw (G) and adjust screw (F) so that the CTL output become maximum.**
3. **Tighten screw (G) with 1.0Kg torque.**

Note:

1. **Adjust alternately with other A/C head adjustments(Azimuth, Height).**

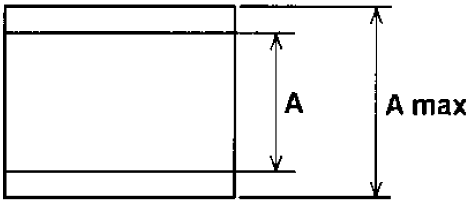


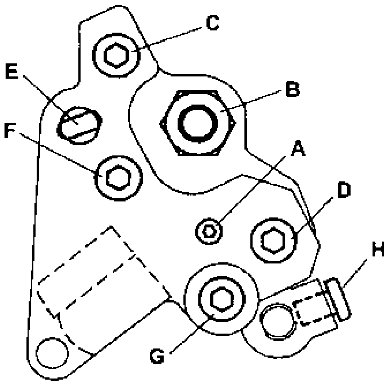


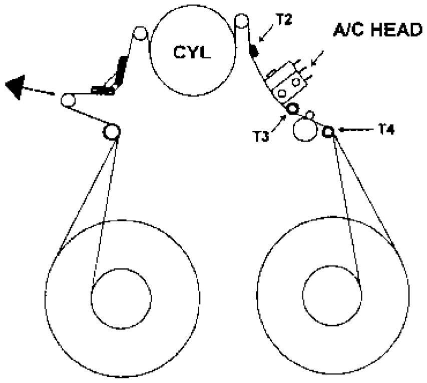
3.5.19. A/C Head Tilt Confirmation

SPEC	**A/Amax ≥ 0.8**
TEST POINT	**TP101:CUE AUDIO (CUE Board:H2)**
ADJUSTMENT	**SCREW A and G (A/C Head)**
MODE	**PLAY**
TAPE	**NTSC: VFM3580KM (14min to 22min)** **PAL: VFM3680KM (14min to 22min)**
M.EQ	**Oscilloscope**
TOOL	**VFK1178,VFK1148(Hex Driver)**

1. **Playback the Alignment tape.**
2. **Confirm that the screw G and H are not loosened.**
3. **Push the tension arm follow the arrow (B) direction as shown in figure as range of T2 post does not move. And confirm that the CUE output level is within specification.**
4. **If out of specification, loosen the screw G and adjust the screw A, then tighten the screw G with 1.0 kg torque.**
5. **The final touch of the adjustment must be turned clockwise. After this adjustment, confirm that the screw A is not loosened.**
6. **If adjust the screw A, Confirm that the tape pass condition follow Post Limit Confirmation procedure (item 5-14).**



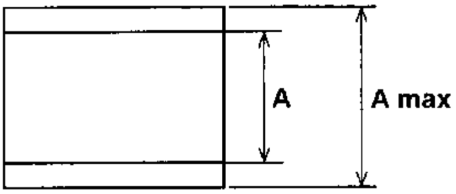


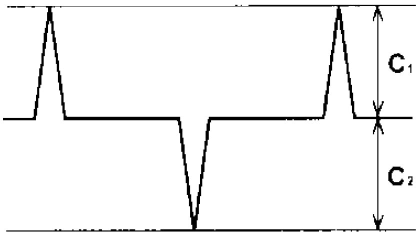

B
CYL
T2
A/C HEAD
T3
T4

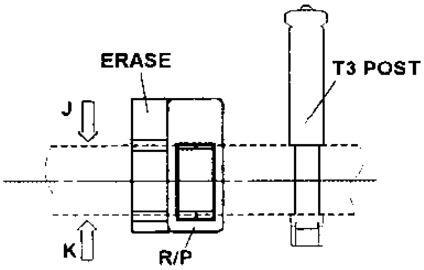
3.5.20. A/C Head Height Confirmation

SPEC	**A≥0.95×Amax, C1,C2 ≥ 1.8V**
TEST POINT	**TP101 CUE AUDIO (CUE Board:H2)** **TP30 CTL (SERVO Board:F1)**
ADJUSTMENT	**SCREW B and H(A/C Head)**
MODE	**PLAY**
TAPE	**NTSC: VFM3580KM (14min to 22min)** **PAL: VFM3680KM (14min to 22min)**
M.EQ	**Oscilloscope**
TOOL	**VFK1150(Nut Driver)** **VFK1190(Hex Wrench)**

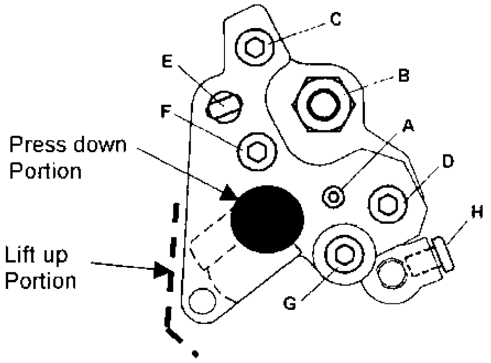
1. **Playback the Alignment tape.**
2. **Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the CUE output level at TP101 does not increased.**
3. **If increases CUE output, A/C Head Height adjustment performed. And also confirm that the CTL output level.**
4. **If adjust the height of A/C Head, Azimuth also changed. Therefore adjust and confirm alternately Height and Azimuth of A/C Head.**
5. **After screw (H) is tightened, height and tilt of A/C Head are changed. Therefore confirmation of specification must be done after tightening the screw (H).**






ERASE
T3 POST
J
K
R/P

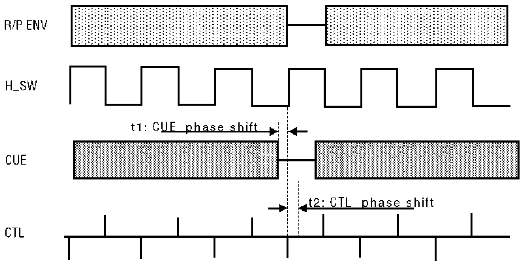
A/C HEAD HEIGHT

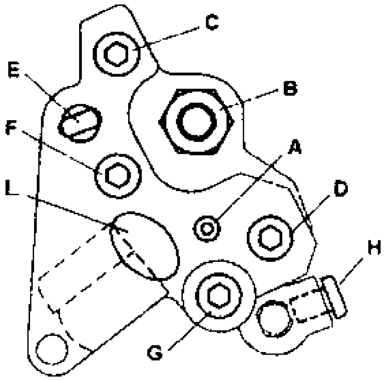

C
E
B
F
A
D
H
G
Press down Portion
Lift up Portion

3.5.21. A/C Head Azimuth and X-value Adjustment.

SPEC.	As shown in below figure. 250us≤t1,t2≤+250us	TEST POINT	TP16 :RP ENV (RF AMP B TP233:RP HSW (SERVO E TP101:CUE AUDIO (CUE E TP30 :CTL (SERVO:F1)
ADJUSTMENT	A/C Head each screws		
MODE	PLAY SERVO ADJUST: A07:RP LINEAR P	M.EQ	Oscilloscope
TAPE	NTSC: VFM3582KM (X-value) PAL: VFM3682KM (X-value)	TOOL	VFK0357(Eccentric Screw

1. Open the Service menu and select the item “A07:RP LINEAR P” on Servo Adjust menu for RP Head ATF Playback.
2. Playback the X-value Alignment tape.
3. Confirm that the phase of CUE and CTL are within specification against RP HSW pulse trigger. If not perform the X-value adjustment follow the below procedure.
4. Adjust A/C Head Azimuth (refer to Azimuth adjustment procedure) so that the CTL and Lack part of CUE(t2) is match in the phase.
5. Confirm the lack track of envelope, and select the HSW correspond with it (The lack track is correspond HSW high with L ch).
6. Adjust X-value so that the reference of HSW and CTL trigger (CTL falling edge is the reference: refer to below figure) are match in the phase(t1). To adjust X-value, loosen the screw C and D, adjust the hole E by VFK0357. After adjustment tighten the screw C and D with 2.5Kg torque. At this time adjust the phase simultaneously with Azimuth so that the CTL and CUE phase is kept.
7. Hit the top plate (portion L as shown in below figure) of A/C Head lightly by a pointed end of Eccentric driver , then confirm the phase is not shifted finally.





3.5.22. REV Tape Pass Confirmation and Adjustment (T4 post height adjustment)

SPEC.	C1,C2≥Cp1,Cp2×0.75 Lower limit at T3 post on REV mode	TAPE	NTSC: VFM3580KM PAL: VFM3680KM
TEST POINT	TP30(SERVO:F1)	M.EQ	Oscilloscope
ADJUSTMENT	T4 post height	TOOL	VFK1151(Nut Driver)
MODE	REV×1		

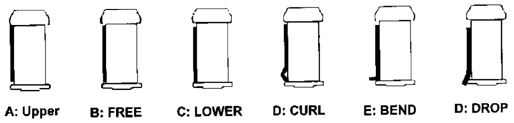
1. Place unit into REV mode, and confirm the post limit and CTL signal are in the specification. IF not, adjust T4 post follow the below procedure.
2. Turn the Nut of T4 post clockwise or counter-clockwise follow the tape limit condition at T3 post. The maximum rotation angle is 90 degree.
3. Place unit into REV X1 mode and confirm the CTL output level is become more than 75% on play mode. Confirm the tape pass limit become lower limit at T3 post and the tape does not have curl at T3 and T4 post.
4. However out of specification, adjust T4 post height follow the Post Height Pre-adjustment procedure.

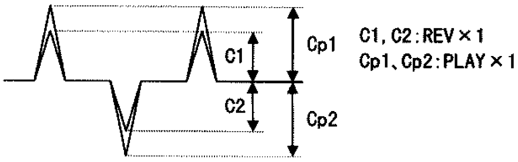
T4 Nut adjustment direction

Direction of adjustment nut of T4 post	CTL level on REV mode	Lower limit at T3 post On REV mode
Tighten direction	Increase	Tape touch to strong
Loosen direction	Decrease	Tape touch to weak

Post Limit

Post Name	Tape limit					
	A	B	C	D	E	F
T3 Post	NG	NG	OK	NG	NG	NG
T4 Post	OK	OK	OK	NG	NG	NG





3.5.23. CTL Self Recording Level Confirmation

SPEC.	Refer to below table
TEST POINT	TP30 (SERVO Board)
MODE	REC and PLAY
TAPE	Blank tape
M.EQ	Oscilloscope

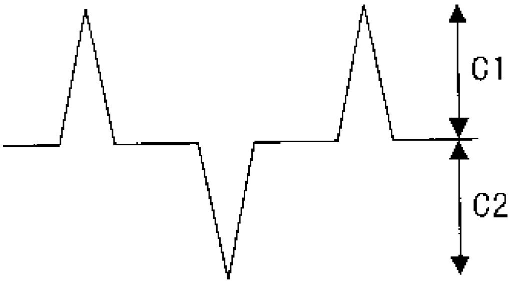
Note:

This confirmation should be done after each screws of A/C Head are fixed.

1. Record the blank tape.
2. Playback the recorded portion and confirm the CTL level is within specification as shown as below table on PLAY and REV X1 mode.

CTL Output Level C1,C2		
PLAY	REV×1	REV×0.2
C1,C2≥1.8V	C1,C2≥1.4V	C1,C2≥1.2V

1. PLAY NG → Re-confirm the A/C Head height adjustment.
2. REV NG → Re-confirm the T4 post adjustment.



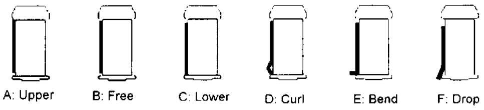
CTL Output Level C1,C2

3.5.24. PLAY Tape Pass Limit Confirmation

SPEC.	Each Post limit shown in table
MODE	PLAY
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit(Refer the figure)						Adjustment	
	A	B	C	D	E	F		
S5 post	NG	OK	OK	NG	NG	NG	S4,S5 Post	Post Height Pre-Adj.
S4 post	NG	NG	OK	NG	NG	NG		
S1 post	OK	NG	NG	NG	NG	NG	S1 Post	Envelope waveform Adj.
T1 post	OK	NG	NG	NG	NG	NG	T1 Post	Envelope waveform Adj.
T3 post	NG	NG	OK	NG	NG	NG	A/C Head tilt	A/C Head tilt Adj.
T4 post	NG	OK	OK	NG	NG	NG	T4 Post	Post Height Pre-Adj

1. Place unit into PLAY mode and confirm the each post limits is within specification.
2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).



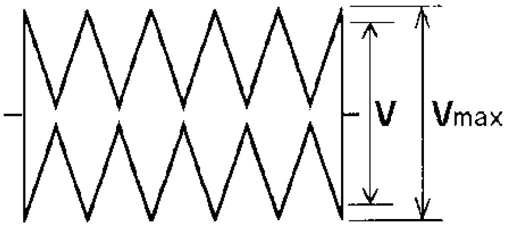
3.5.25. Confirmation of Envelope on REV,REW and FF mode.

SPEC.	V/Vmax ≥ 0.9
TEST POINT	TP16 :RP ENV (RF AMP Board:H4)
MODE	REV,REW,FF
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Oscilloscope

1. Confirm that the Envelope waveform becomes in the specification on REV,REW and FF mode as refer to figure and below.

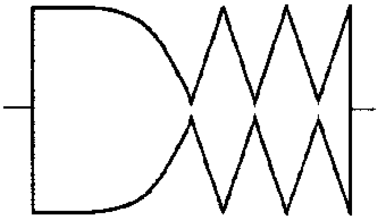
- **Waveform must be Diamond Style.**
- **All the peak level must be more than 90% of maximum level. / V/Vmax ≥ 0.9**

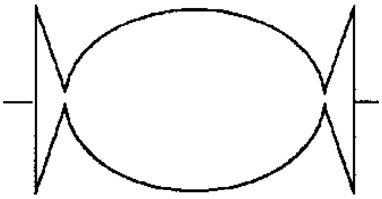
2. If out of spec, adjust S4 post height.



OK

NG





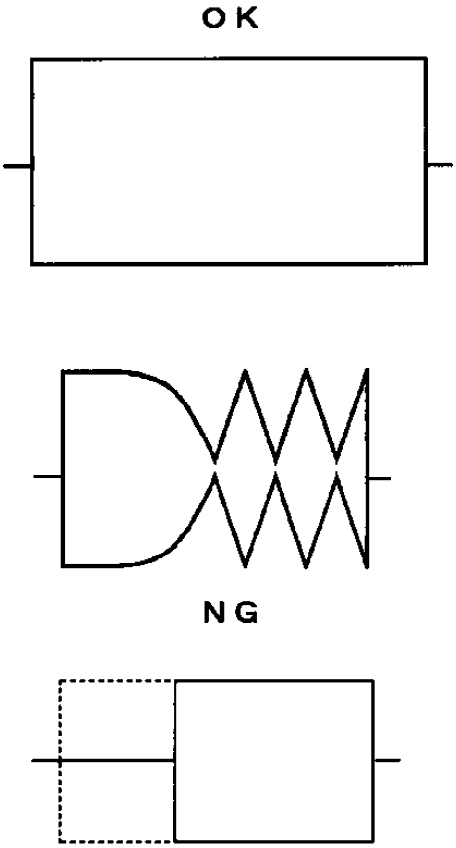
3.5.26. Confirmation of Play Start Envelope

TEST POINT	**TP16:RP ENV (RF AMP Board:H1)**
MODE	**REW/REV → PLAY** **Loading completion → PLAY** **FF → PLAY**
TAPE	**L cassette(123min,Recorded tape)** **Tape beginning portion**
M.EQ	**Oscilloscope**

Note:

This adjustment must be done after Envelope Waveform Adjustment.

1. **Confirm that the envelope appears immediately, when the mode is changed from REW to PLAY,REV to PLAY,FF to PLAY,and Lording to PLAY mode.**
2. **If out of spec, adjust S4 post height.**

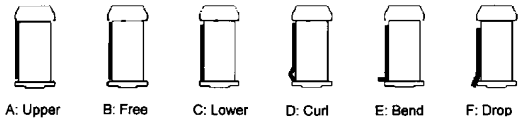


3.5.27. Tape Pass Limit Confirmation

SPEC	**Each Post limit shown in table.**
MODE	**REV**
TAPE	**M cassette (MP tape) tape. Tape beginning and end portion**

Post Name	Tape Limit(Refer to figure)					
	A	B	C	D	E	F
S5 Post	OK	OK	OK	NG	NG	NG
S4(Tension) Post	NG	OK	OK	NG	NG	NG
S1 Post	OK	NG	NG	NG	NG	NG
T1 Post	OK	OK	OK	NG	NG	NG
T3 Post	NG	NG	OK	NG	NG	NG
T4 Post	NG	NG	OK	NG	NG	NG

1. **Place unit into REV mode and confirm the each post limits is within specification.**
2. **If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).**

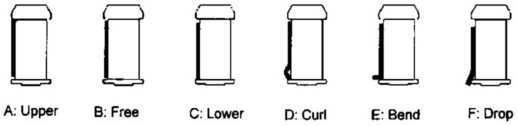


3.5.28. FF, REW Tape Pass Limit Confirmation

SPEC.	Each Post limit shown in table.
MODE	FF,REW
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit(Refer to figurte)					
	A	B	C	D	E	F
S5 Post	OK	OK	OK	NG	NG	NG
S4(Tension) Post	NG	OK	OK	NG	NG	NG
S1 Post	OK	NG	NG	NG	NG	NG
T1 Post	OK	OK	OK	NG	NG	NG
T3 Post	OK	OK	OK	NG	NG	NG
T4 Post	OK	OK	OK	NG	NG	NG

1. **Place unit into FF and REV mode and confirm the each post limits is within specification.**
2. **If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).**


A: Upper
B: Free
C: Lower
D: Curl
E: Bend
F: Drop

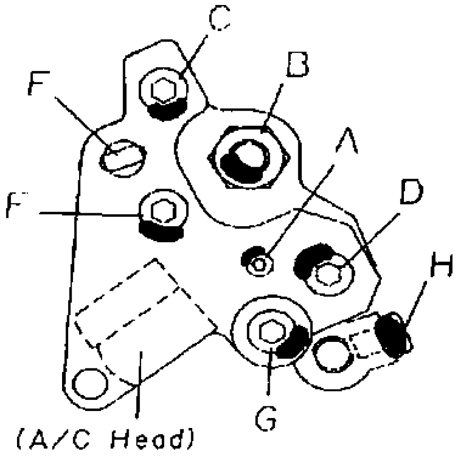
3.5.29. Screw Lock Tight of A/C Head and T3,T4 Post

[Screw Lock Tight of A/C Head]

	SCREW A	OTHER SCREW
Lock Tight Grew Quantity	1/3 of the screw	1/3 of the screw

1. Fix the screw by the Lock Tight Grew after adjustment..

2. Before adjustment melt the Grew.

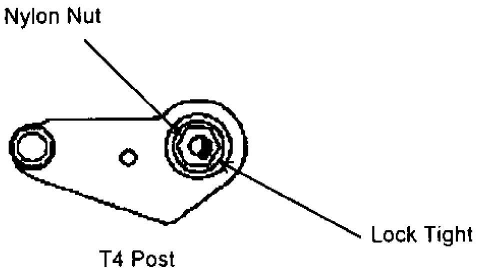

C
F
B
A
F
D
H
G
(A/C Head)

[Screw Lock Tight of T3 and T4 Post]

	T3 Post	T4 Post
Lock tight grew quantity	1/4 of the screw	1/4 of the screw

1. After adjustment, attach the lock tight grew at the Nylon nut..

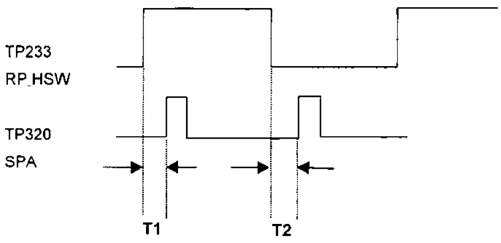
2. Before adjustment, melt the Grew.


Nylon Nut
Lock Tight
T4 Post

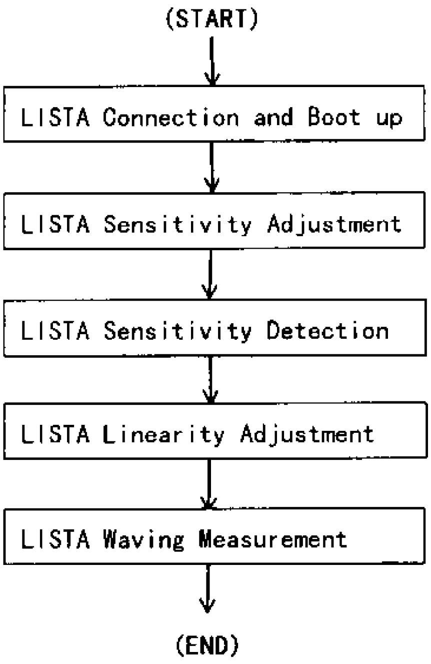
3.5.30. PG SHIFTER Adjustment

SPEC.	T1, T2 = 126.4 μ sec ± 2 μ sec.
MODE	PLAY
TEST POINT	TP320 SPA (SERVO Board:F1) TP233 R/P HSW (SERVO Board:F1)
ADJUSTMENT	A01:PG SHIFTER (EVR on SERVO ADJUST menu)
M.EQ	Oscilloscope
TAPE	NTSC: VFM3580KM PAL: VFM3680KM

1. Open the SERVO ADJUST menu on the Service menu and select the item "A01:T PG SHIFTER".
2. Playback the Alignment tape.
3. Press the SEARCH button and keep it until the numerical value of "A01:PG SHIFTER" are renewed.
4. Connect the scope toTP233 and TP320. Trigger the scope by TP233. Then it is displayed as shown in figure.
5. Confirm that the period of T1 and T2 in specification (126.4 μ sec± 2 μ sec).



3.5.31. LISTA Adjustment Procedure.


(START)
LISTA Connection and Boot up
LISTA Sensitivity Adjustment
LISTA Sensitivity Detection
LISTA Linearity Adjustment
LISTA Waving Measurement
(END)

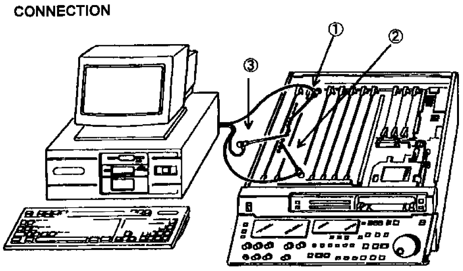
3.5.32. LISTA Connection and Boot Up

TEST POINT	**TP321 ATF ERR (SERVO Board:F1)** **TP233 PB HSW (SERVO Board:F1)** **TP232 R/P HSW (SERVO:Board:F1)** **TG510 GND (SERVO Board:F1)**
M.EQ	**P/C (AD Board should be installed),Oscilloscope**
TAPE	**NTSC: VFM3581KM (LISTA)** **PAL: VFM3681KM (LISTA)**
TOOL	**VFK1481(LISTA Software),VFK1186(LISTA Cable)**

1. Connect the LISTA Cable to A/D board on PC.

2. Connect the Clips of LISTA Cable to test point on Servo Board as follow as below.

(1).ATF: TP321 (ATF error)
(2).HSW: TP233 (HSW:RP) or TP232 (HSW:PB)
(3).GND: TG510 (GND)



3. Boot up the LISTA software on DOS mode.

*** Install and Boot up.**
All files on the floppy disk (VFK1481) copy to created directly on PC(i.e. C:\LISTA).
Type “LISTA” and press ENTER Key, then boot up the LISTA software VFK1481

4. Select the item “DVCPRO” for format select on the menu.

5. Select the item “AJ-D850” for selected model on the menu.(AJ-D850 is equivalent to AJ-D850)

6. After selected model, appeared alignment tape data on the screen for select the Serial number on the alignment tape. But if LISTA software have not resisted data of alignment tape, press the ESC key, then main menu is display on the screen. And select item “<4> Alignment Tape” for entry the data on the attachment sheet, which is enclosed of alignment tape.

<How to Entry the Attachment Data of Alignment Tape>

1. Select the item “<4> Alignment Tape” on the main menu of the LISTA software.

2. Select the item “<2> ENTRY” on the alignment tape menu.

3. After display the screen of “<< Alignment tape Data Entry >>”, first input the Serial number follow the printed number on the tape label. And input the number “0” or “1” for select the PAL/NTSC. And after that for entry the tape type, in case of DVCPRO input to “0” , in case of DV input to “1”.

4. After select the Tape type, the frame for input the DATA and CHECK SUM appeared on the screen. Input the numerical value in numerical order on the data sheet, which are enclosed with alignment tape. If input the wrong number, appear the error message on the screen, then confirm that the data on the sheet.

5. After entry the data, select “<1> SELECT” on the Alignment Tape menu and select the serial number of the alignment tape.

<<Alignment Tape Data Entry>> Serial No.0596003(NTSC) 18um

[1]	-0.1	[11]	0.7	[21]	-0.4	[31]	-0.4
[2]	0.1	[12]	1.0	[22]	-0.2	[32]	-0.6
[3]	0.0	[13]	0.7	[23]	-0.7	[33]	-0.3
[4]	0.2	[14]	0.5	[24]	-0.6	[34]	-0.2
[5]	0.6	[15]	0.2	[25]	-0.7	[35]	-0.1
[6]	0.5	[16]	-0.5	[26]	-0.3	[36]	-0.3
[7]	0.7	[17]	-0.3	[27]	-0.4	[37]	-0.1
[8]	0.9	[18]	-0.3	[28]	-0.4		
[9]	1.0	[19]	-0.1	[29]	-0.6	[CS]	-0.6
[10]	0.8	[20]	-0.6	[30]	-0.3		

3.5.33. LISTA Sensitivity Adjustment (R/P Head)

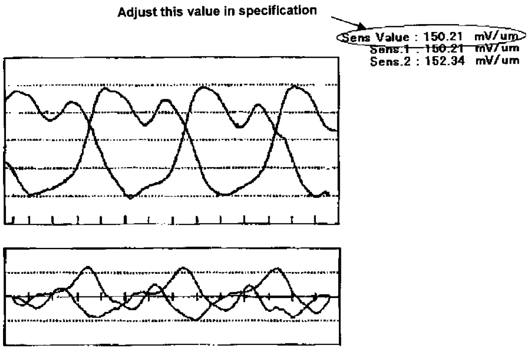
SPEC.	Sensitivity:150±15 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 R/P HSW (SERVO Board:F1) TG510 GND(SERVO Board:F1)
ADJUSTMENT	A06:RP GAIN P (SERVO ADJUST)
TAPE	NTSC: VFM3581KM (LISTA) PAL: VFM3681KM (LISTA)

Note:
Before perform the Sensitivity adjustment, perform the PRE-EQ adjustment for adjust ENV Level (L/R) on RF AMP (H4) Board.(Refer to Sec. 4 :electrical adjustment).

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR “A06:RP GAIN P”.
3. Playback the LISTA alignment tape.
4. Select the “<6> ATF Error Signal Monitor” on the LISTA main menu and after appear the message “1.2% Speed...”, press

ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.

5. Adjust EVR “RP GAIN P” so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.



Adjust this value in specification

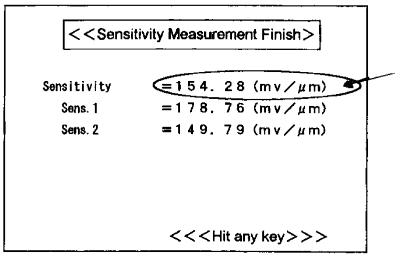
Sens Value : 150.21 mV/um
Sens.1 : 150.21 mV/um
Sens.2 : 152.34 mV/um

3.5.34. LISTA Sensitivity Detection (RP Head)

SPEC	Sensitivity:150±15 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO P.C.Board:F1) TP233 R/P HSW (SERVO P.C.Board:F1) TG510 GND(SERVO P.C.Board:F1)
ADJUSTMENT	——
TAPE	NTSC: VFM3581KM (LISTA) PAL: VFM3681KM (LISTA)

1. Open the SERVO ADJUST menu on Service menu and select the EVR “A06:RP GAIN P”.
2. Playback the LISTA alignment tape.
3. Select the “<1>Sensitivity Measurement” on the LISTA main menu and after appear the message “1.2% that Speed...”, press ENTER key, then LISTA software start measurement of sensitivity value.
4. Confirm the sensitivity value is within specification, when the message << Sensitivity Measurement Finish>> and “Sensitivity = numerical value” are displayed on the screen.
5. If out of specification, repeat the steps 3 and 4.
6. If still out of specification, perform the “LISTA Sensitivity

Adjustment again.



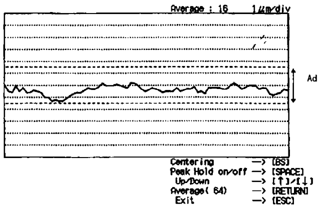
```
<<Sensitivity Measurement Finish>

Sensitivity   =154. 28 (mv/μm)
Sens. 1       =178. 76 (mv/μm)
Sens. 2       =149. 79 (mv/μm)

                 <<<Hit any key>>>
```

Confirm this value

3.5.35. LISTA Linearity Adjustment and Waving Measurement.

SPEC	Linearity: Less than 3um, Waving: Less than 1.5um
MODE	PLAY (EVR is select to “A07: RP LINEAR P”)
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 R/P HSW(SERVO Board:F1) TG510 GND (SERVO Board:F1)
ADJUSTMENT	S1 and T1 Post Height
TAPE	NTSC: VFM3581KM (LISTA) PAL: VFM3681KM (LISTA)

1. **Open the SERVO ADJUST menu on Service menu and select the EVR “A07: RP LINEAR P”**
2. **Playback the LISTA alignment tape.**
3. **Select the item “(2) Linearity Measurement” on the LISTA main menu and display the linearity waveform.**
4. **When the waveform as shown as below figure is displayed on the screen, press the “BS (back space)” key for display the waveform to center of scale on the screen. And adjust height of S1 and T1 post by Post Driver so that the linearity waveform is become flat as possible, and it should be in the specification.**
   *** Adjust linearity waveform in the red dot line on the screen.**



```
Centering       —> [BS]
Peak Hold on/off —> [SPACE]
 Up/Down        —> [↑]/[↓]
Average( 64)    —> [RETURN]
 Exit           —> [ESC]
```

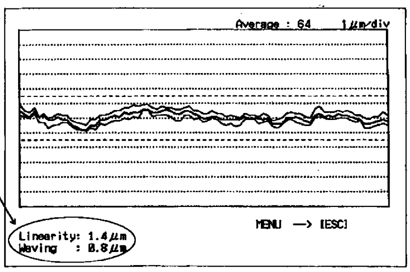
Adjust linearity into this area

*** POINT:**
The part of left side of waveform(entrance side) is adjusted by height of S1 post and part of right s of waveform(exit side) is adjusted by height of T1 post.
Lower part of above waveform of figure is displayed lead on Cylinder.
When the post driver is remove from upper part of post, linearity waveform is changed.
After finish this adjustment, eject the tape and insert the tape again for confirm the shape of linea waveform does not changed.

5. After finish the linearity adjustment, measure the numerical value of linearity and waving.

***[Waving Measurement]**

1. **Press “SPACE” key for make the Peak Hold during 30 seconds, when linearity is displayed.**
2. **After finish the Peak Hold, press “SHIFT” and “}”,key simultaneously on the Key Board, then display the numerical values of “Linearity” and “Waving” on left lower portion of screen. And confirm the numerical values are in the specification. Also confirm the range of waving waveform is same quantity from entrance side to exit side. If the “Linearity” and “Waving” are out of specification and it caused by not enough limit of entrance or exit side of envelope, then adjust height of S1 and T1 post.**
3. **After this measurement is finished, press ESC key for return to main menu.**



Linearity: 1.4µm
Waving : 0.8µm

Confirm this Value

***NOTE: Saving of LISTA Data**
The LISTA software can be saved linearity waveform and measurement value of linearity and waving as one file data to PC.

1. **Basically this operation should be performed after linearity and waving measurement finished.**
2. **Select the item “(3) Data Save/Load ” on the LISTA main menu.**

And after open the menu select the item "<1> Save".

3. **The linearity waveform as Peak Hold displayed on the screen. And after appeared message "File Name?" on the screen, entry the File Name and Comment. File Name must be in 8 characters, and comment is must be in 20 characters. As comment, entry the Serial Number, VTR Model Number and Head Rotation Hours etc, for use management of linearity data of each VTR.**
4. **After completion of saving, select the item "<2> Load" on the "(3) Data Save/Load" menu, then appear the saved File Name on the screen. And select it previous saved file for confirm the waveform and numerical value displayed correctly. By press "SHIFT" and "}",key simultaneously on the Key Board., then display the numerical values of "Linearity" and "Waving" on left lower portion of screen.**

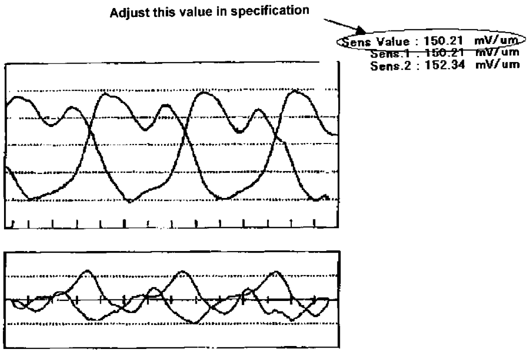
3.5.36. LISTA Sensitivity Adjustment (PB HEAD)

SPEC.	**Sensitivity:150±15 (mV/um)**
MODE	**PLAY**
TEST POINT	**TP321 ATF ERR (SERVO Board:F1)** **TP232 PB HSW(SERVO Board:F1)** **TG510 GND (SERVO Board:F1)**
ADJUSTMENT	**A04:PB GAIN P**
TAPE	**NTSC: VFM3581KM (LISTA)** **PAL: VFM3681KM (LISTA)**

1. **Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.**
2. **Open the SERVO ADJUST menu on Service menu and select the EVR "A04:PB GAIN P".**
3. **Playback the LISTA alignment tape.**
4. **Select the "<6> ATF Error Signal Monitor" on the LISTA main menu and after appear the message "1.2% Speed...", press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.**
5. **Adjust EVR "A04 PB GAIN P" so that the sensitivity value is**

within specification.

6. After finish this adjustment, press ESC key to exit to the main menu.

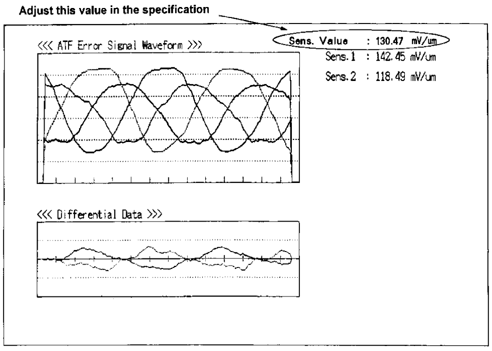


```
Sens Value : 150.21  mV/um
    Sens.1 : 150.21  mV/um
    Sens.2 : 152.34  mV/um
```

3.5.37. LISTA Sensitivity Adjustment (DV Compatibility)

SPEC.	Sensitivity:130±30 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 PB HSW(SERVO Board:F1) TG510 GND (SERVO Board:F1)
ADJUSTMENT	A08:RP GAIN
TAPE	NTSC: VFM3581KM (LISTA) PAL: VFM3681KM (LISTA)

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR “A08:R/P GAIN”.
3. Playback the LISTA alignment tape.
4. Select the “<6> ATF Error Signal Monitor” on the LISTA main menu and after appear the message “1.2% Speed...”, press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR “A08 R/P GAIN” so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.



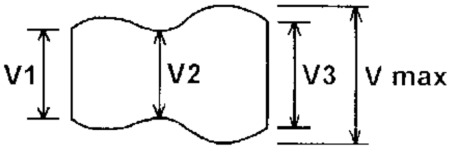
Adjust this value in the specification

```
<<< ATF Error Signal Waveform >>>
Sens. Value   : 130.47  mV/um
Sens.1        : 142.45 mV/um
Sens.2        : 118.49 mV/um
<<< Differential Data >>>
```

3.5.38. Self-Recording Playback Envelope Waveform Confirmation

SPEC	**V1/Vmax,V2/Vmax,V3/Vmax ≥ 0.8**
TEST POINT	**TP16:R/P ENV (RF Board:H4)** **TP1 :TRIG/RP HSW (RF Board:H4)**
ADJUSTMENT	**S1 and T1 Post Height**
MODE	**PLAY**
TAPE	**Blank Tape**
M.EQ	**Oscilloscope**
TOOL	**VFK1149(Post Driver)**

1. **Record the color bar signal.**
2. **Play back the recorded portion and confirm that the envelope output is within specification**
3. **If out of specification, perform the Envelope Waveform and LISTA adjustment again.**



3.6. Mechanical Parts Replacement and Adjustment Procedures

GENERAL

When mechanical parts are replaced, pay attention to the following notes.

1. **Turn power off before replacing any part.**
2. **If any adjustment is required after replacing parts, perform the**

required adjustments.

3. **Use proper fixture tools.**
4. **Make sure to clean the parts after replacement, Also when the mechanical parts are replaced, follow the replacement procedure.**

3.6.1. Cylinder Unit Replacement

(Removal)

1. **Remove the T1 Guide and Cleaning Arm Unit (Refer to item 11-8).**
2. **Disconnect the connector P5002 and P5003 on the Head Buffer board. And remove the screw, which is fixed with flexible cable.**

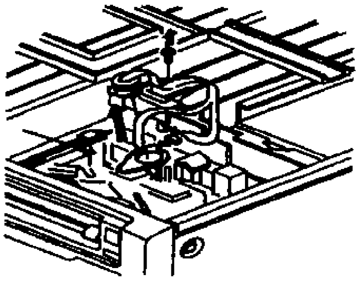


Fig. 6-1-1

Note:

Be careful when removing the flexible cable from the connector. Refer to the way to remove the connector as shown in Figure 6-1-2.

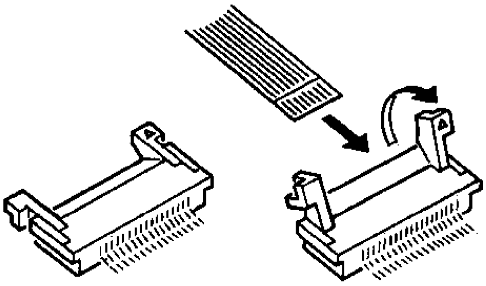


Fig. 6-1-2

3. **Disconnect the connector P33 on Mech I/F P.C.Board at bottom of VTR. Then remove 3 screws (with spring) from the Cylinder unit, and remove the Cylinder unit without touching any mechanical part.**

Note:

Do not touch the cylinder surface by finger directly.

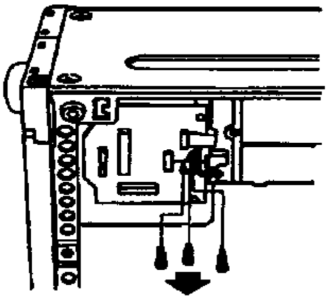


Fig. 6-1-3

(Installation)

1. Install a Cylinder unit as reverse order of its removal.

Note:

Set the Mechanical Chassis pins are matched with the specified cylinder holes on the bottom of the cylinder.

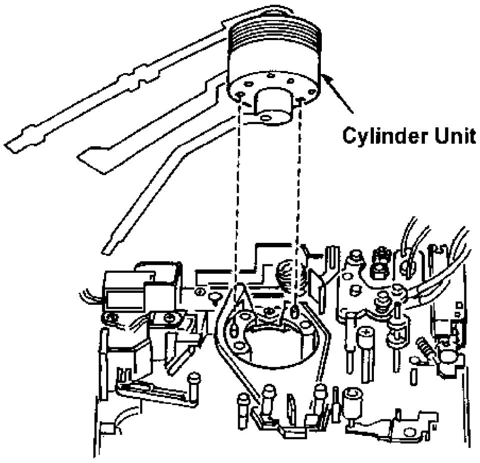


Fig. 6-1-4

2. After installing T1 Guide, T1 Guide position adjustment is necessary (Refer to adjustment procedure of item 6-1-2).

3.6.1.1. Cleaning Arm Unit Replacement

(Removal)

1. Unscrew the 2 screws (A) to remove the T1 Guide as shown in Figure 6-1-5.

2. Pick up the tip portion (B) of Cleaning Arm Unit and remove the spring from Cleaner Arm Unit. Then remove the Cleaning Arm Unit as shown in Figure 6-1-5.

(Installation)

1. **Install the cleaning Arm Unit, then hang the spring on Cleaning Arm Unit.**
2. **Install the T1 Guide and tighten 2 screws (A).**
3. **Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated when the cylinder is rotated.**
4. **T1 Guide position adjustment should be performed.**

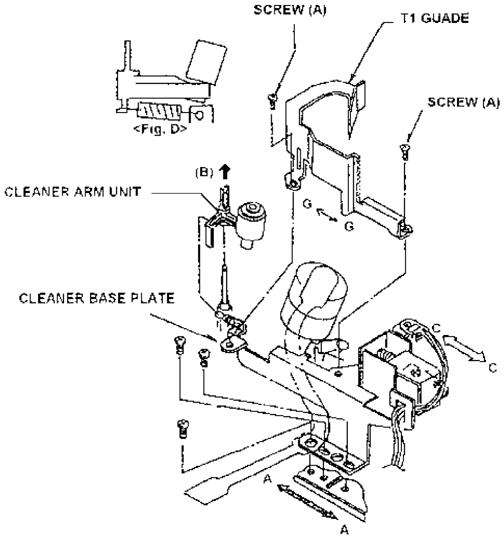


Fig. 6-1-5

3.6.1.2. T1 Guide Position Adjustment

Place the unit in Loading completion mode without tape.

< How to Make the No Tape Loading >

- Open the “SERVO ADJUST” menu in the Service menu.

- “Select the item “T TORQUE” and press the Search button for making the loading condition. And turn power to off.

1. **Observe the clearance (B) between T1 Guide and T1 post as shown in Figure 6-1-6. And make sure that it is within 0.2 to 0.5mm .**
2. **If not, loosen the 2 screws (A) and adjust the position of T1 Guide by moving to arrow direction (G□G) so that the clearance (B) is within specification. And tighten the 2 screws (A).**

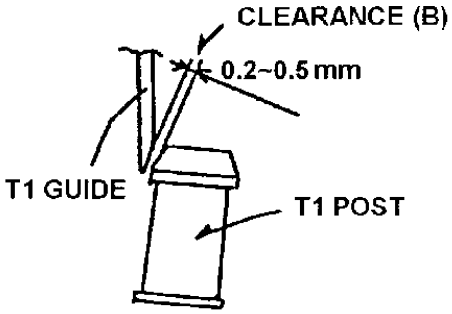
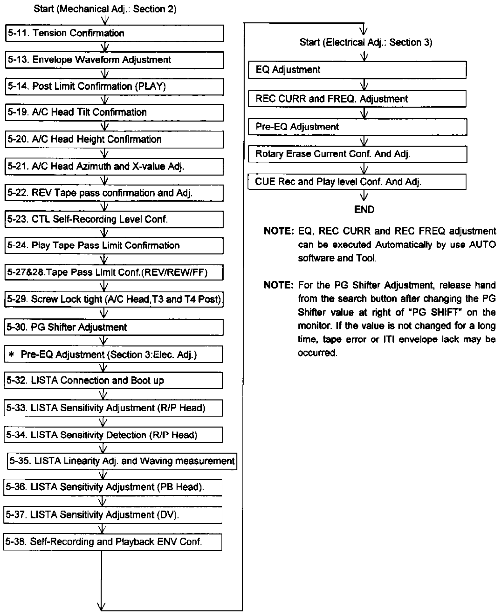

CLEARANCE (B)
0.2~0.5 mm
T1 GUIDE
T1 POST

Fig. 6-1-6

3.6.1.3. Adjustment Flow Chart after Cylinder Unit Replacement

1. Adjust following items after Cylinder Unit replacement.


Start (Mechanical Adj.: Section 2)
5-11. Tension Confirmation
5-13. Envelope Waveform Adjustment
5-14. Post Limit Confirmation (PLAY)
5-19. A/C Head Tilt Confirmation
5-20. A/C Head Height Confirmation
5-21. A/C Head Azimuth and X-value Adj.
5-22. REV Tape pass confirmation and Adj.
5-23. CTL Self-Recording Level Conf.
5-24. Play Tape Pass Limit Confirmation
5-27&28.Tape Pass Limit Conf.(REV/REW/FF)
5-29. Screw Lock tight (A/C Head,T3 and T4 Post)
5-30. PG Shifter Adjustment
* Pre-EQ Adjustment (Section 3:Elec. Adj.)
5-32. LISTA Connection and Boot up
5-33. LISTA Sensitivity Adjustment (R/P Head)
5-34. LISTA Sensitivity Detection (R/P Head)
5-35. LISTA Linearity Adj. and Waving measurement
5-36. LISTA Sensitivity Adjustment (PB Head).
5-37. LISTA Sensitivity Adjustment (DV).
5-38. Self-Recording and Playback ENV Conf.
Start (Electrical Adj.: Section 3)
EQ Adjustment
REC CURR and FREQ. Adjustment
Pre-EQ Adjustment
Rotary Erase Current Conf. And Adj.
CUE Rec and Play level Conf. And Adj.
END

NOTE: EQ, REC CURR and REC FREQ adjustment can be executed Automatically by use AUTO software and Tool.

NOTE: For the PG Shifter Adjustment, release hand from the search button after changing the PG Shifter value at right of "PG SHIFT" on the monitor. If the value is not changed for a long time, tape error or ITI envelope lack may be occurred.

Note:

EQ, REC CURR and REC FREQ adjustment can be executed Automatically by use AUTO software and Tool.

Note:

For the PG Shifter Adjustment, release hand from the search button after changing the PG Shifter value at right of “PG SHIFT” on the monitor. If the value is not changed for a long time, tape error or ITI envelope lack may be occurred.

3.6.2. A/C Head Replacement

3.6.2.1. Replacement

***Required tools:**
Nut Driver (5.5m/m)(VFK1150)
Hex Driver (VFK1148)
Hex Wrench (VFK1190)

(Removal)

1. **Remove the Top Plate.**
2. **Loosen the hex. screw (B) and remove the Nut (C). Pick up the Head Height Adjustment Spring and then remove the A/C Head Unit as shown in Figure**
   Point:
   Memorize the height of Nut (C) before removing the Nut (C),

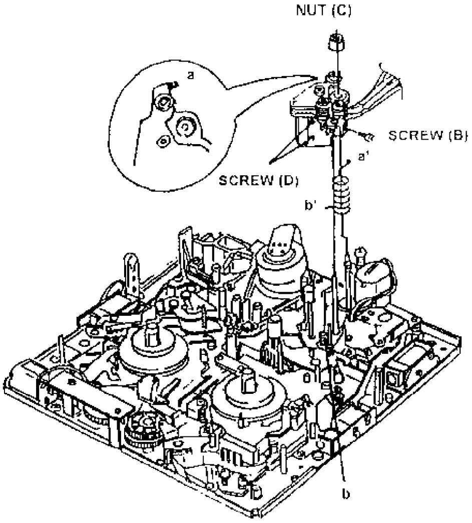


Fig. 6-2-1

3. **Remove the 2 screws (A). and disconnect the 2 connectors P1 on the A/C Head I/F P.C.Board and P30 on the Mech I/F P.C.Board, and then remove the A/C Head from the A/C Head Plate.**
4. **Remove 2 screws (D) to remove the Shield Cover as shown in Figure 6-2-1.**
5. **Unsolder the lead wires as shown in Figure 6-2-3.**

Note:
When unsolder the lead wires, do not unsolder all at the same time.)

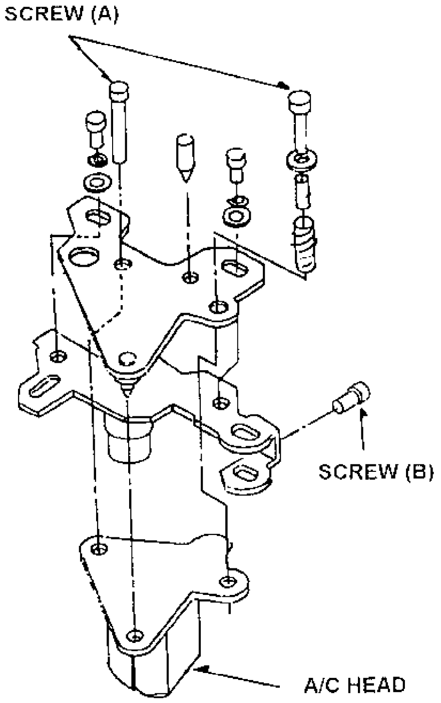


Fig. 6-2-2

(Installation)

1. **Remove the Shield Case from the New A/C Head and solder the lead wires to New A/C Head (Refer to Figure 6-2-3).**
2. **Re-install the shield case to A/C Head.**
3. **Install the A/C Head to A/C Head Plate and tighten 2 screws (A) so that A/C Head is parallel to A/C Head Plate.**
4. **Install the A/C Head Unit.**
5. **Put on the Head Height Adjustment Spring and tighten the Nut (C).**
6. **Clean the surface of the A/C Head.**
7. **Perform the A/C Head adjustment.**

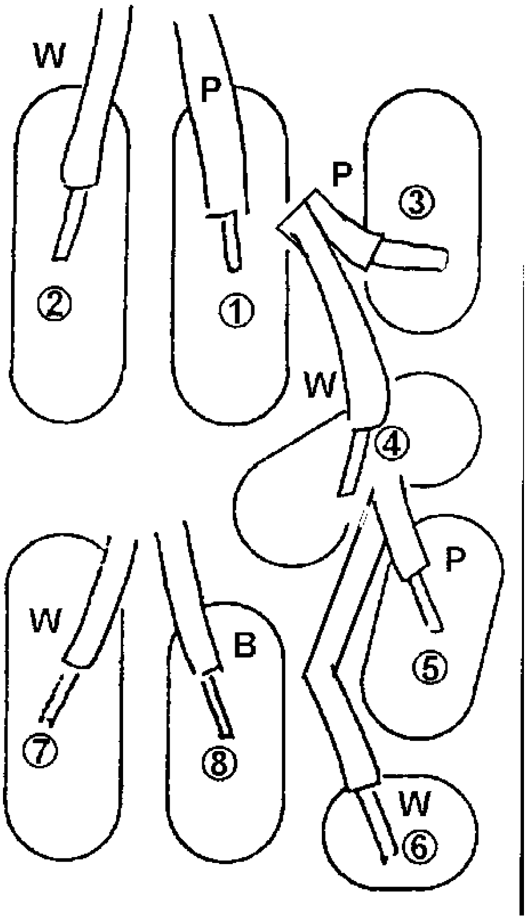


Fig. 6-2-3

A/C Head Side	Cable Color		Connector No.
1	PINK	YELLOW	P1
2	WHITE		
3	PINK	RED	
4	WHITE		
5	PINK	GREEN	
6	WHITE		
7	WHITE	YELLOW	P30
8	BLACK		

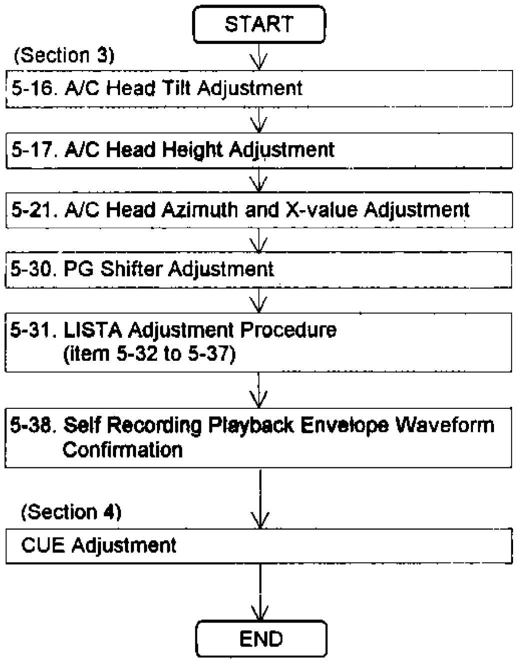
3.6.2.2. Adjustment Flowchart After A/C Head Replacement

1. **After installing, Mechanical and Electrical Adjustments should be performed.**

   Note:

   The hex screw (B) is kept loose until the A/C Head Height Adjustment is completed.

2. **After replacing the A/C Head, perform the following steps.**


START
(Section 3)
5-16. A/C Head Tilt Adjustment
5-17. A/C Head Height Adjustment
5-21. A/C Head Azimuth and X-value Adjustment
5-30. PG Shifter Adjustment
5-31. LISTA Adjustment Procedure (item 5-32 to 5-37)
5-38. Self Recording Playback Envelope Waveform Confirmation
(Section 4)
CUE Adjustment
END

3.6.3. Supply Reel Rotor Unit and Take Up Reel Rotor Unit Replacement

(Removal)

1. Remove the Top Panel (Refer to item [2-1. Removal of Top Panel]).
2. Remove the Front Loading Unit (Refer to item [2-5. Removal of Front Loading Unit]).
3. Remove the Bottom Panel (Refer to item [2-2. Removal of Bottom Panel]).
4. Disconnect the connector P34 and P35 on the Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Move the S1 post to loading direction by manual ejecting method until the screw (C) can removing position.
6. Confirm the supply and Take Up Brake are not release.
7. Press the iron core of M stopper solenoid to release the M stopper.
8. Remove the 4 screws (C), (D) and (E) as shown in Figure 6-3-2.
9. Remove the Supply and Take Up Reel Rotor Unit and Reel Outer Rail.

   Note:

   Memorized the groove position of Reel Base, which inserted the pin of Drive Arm Unit.

(Installation)

1. **Through in the Reel Outer Rail to New Supply and Take Up Reel Rotor Unit.**
2. **Hang on the Reel Rotor Unit to Reel Inner Rail and Install the Reel Rotor Unit then the pin of Drive Arm Unit should be matched with groove position of Reel Base as shown in Figure 6-3-3.**
3. **Install the 4 screws (C), (D) and (E).**
4. **Confirm that the Reel Rotor Unit moving smoothly on the Rail by hard.**
5. **Move the Reel Rotor Unit to front side by hand and then pull up the iron core of M stopper solenoid for operating M stopper.**
6. **Set the unloading condition by turn the Emergency shaft counter-clockwise.**
7. **Connect the Flexible Cable to Connector P34 and P35 on the Mech I/F P.C.Board.**
8. **Adjust the Motor Torque Offset value (Refer to item 1-1 of section 3).**
9. **Confirm that the Tension value on playback mode (Refer to item 5-11).**

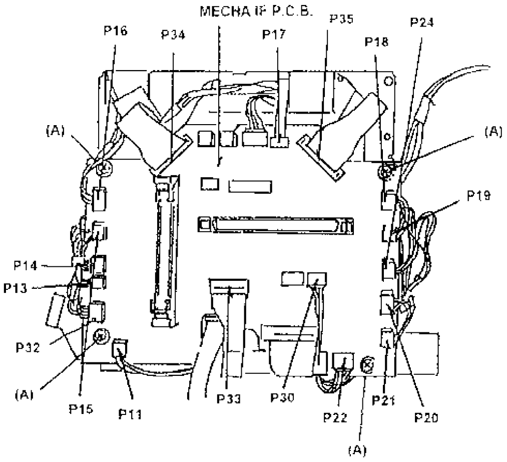


Fig. 6-3-1 Connection of S & T Reel Rotor Unit

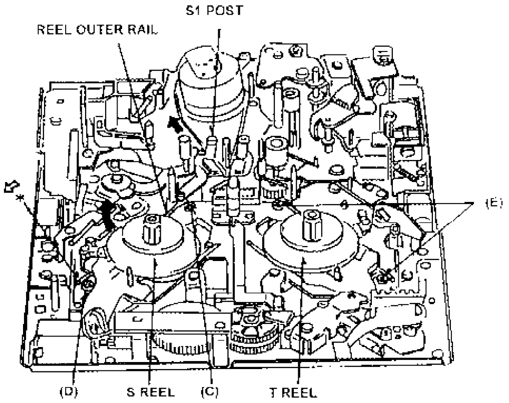

S1 POST
REEL OUTER RAIL
(E)
(D)
S REEL
(C)
T REEL

Fig. 6-3-2 Removal of S & T Reel Rotor Unit

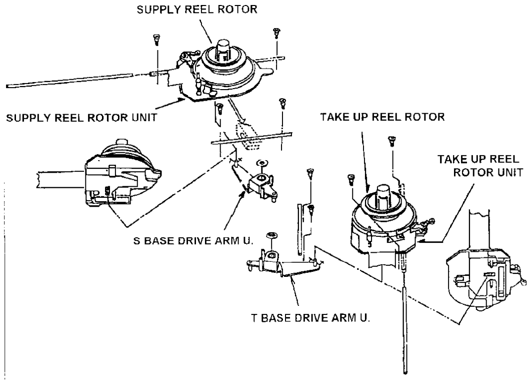

SUPPLY REEL ROTOR
SUPPLY REEL ROTOR UNIT
TAKE UP REEL ROTOR
TAKE UP REEL ROTOR UNIT
S BASE DRIVE ARM U.
T BASE DRIVE ARM U.

Fig. 6-3-3 Installation of S & T Reel Rotor Unit

3.6.4. Supply and Take Up Brake Arm Unit Replacement

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Press the iron core of Brake Solenoid for release the Brake.**
4. **Remove the cut washers (A) and remove the supply and Take Up Brake Arm Unit as shown in Figure 6-4-1.**

(Installation)

1. **When install the new Brake Arm Unit first, hang on the Brake Arm Spring as shown in Figure 6-4-1.**
2. **Follow the previous steps in reverse order.**
3. **Main Brake Torque confirmation is required (Refer to item 5-3).**
4. **Confirm that the Tension value on the Playback mode (Refer to item 5-11).**

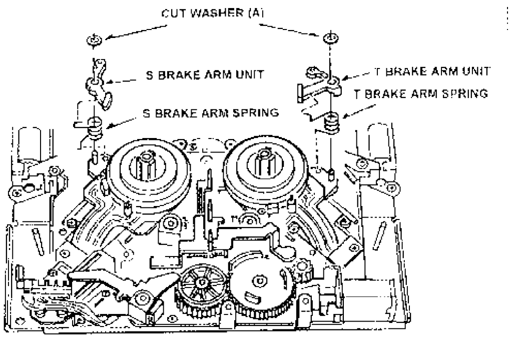

CUT WASHER (A)
S BRAKE ARM UNIT
T BRAKE ARM UNIT
T BRAKE ARM SPRING
S BRAKE ARM SPRING

Fig.6-4-1 Removal of S & T Break Arm Unit

3.6.5. Supply Brake Solenoid Replacement and Adjustment

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Remove the Bottom Panel.**
4. **Disconnect the connector P15 on the Mech I/F P.C.Board as shown in Figure 6-3-1.**
5. **Unscrew the 2 screws (A) and remove the Supply Brake Solenoid Base Unit as shown in Figure 6-5-1.**
6. **Unscrew the 2 screws (B) and remove the supply Brake Solenoid from Supply Brake Solenoid Base Unit as shown in Figure 6-10-1.**

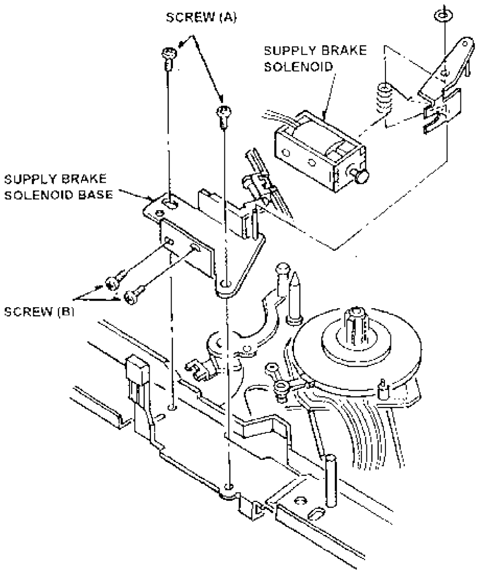

SCREW (A)
SUPPLY BRAKE SOLENOID
SUPPLY BRAKE SOLENOID BASE
SCREW (B)

Fig. 6-5-1 Removal of Supply Brake Solenoid

(Installation)

1. Install the new supply Brake Solenoid follow the removal steps in reverse order.
   Note:
   Hang on the Supply Brake Spring as shown in Figure 6-6-1.
2. Adjustment is required after installation.

(Adjustment)

1. Place the reels in the M cassette size position.
2. Observe the clearance (A) between Brake pad and it's turntable as shown in Figure 6-5-2. And make sure that it is within 0.2 to 0.5mm.
3. If not, loosen the 2 screws (A), which fixed supply and Take Up Brake Solenoid Unit. And adjust the position of Brake Solenoid Unit by moving arrow direction so that the clearance (A) is within specification. And tighten the 2 screws (A).
4. After adjustment, change the reel position to S and L cassette size, and confirm that the clearance (A) is within specification.

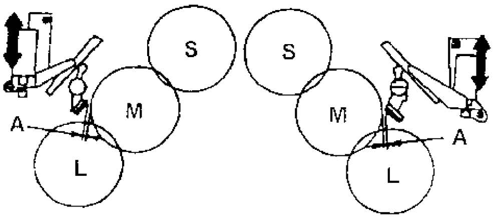


Fig.6-5-2 Brake Solenoid Adjustment

3.6.6. Take Up Brake Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P18 on the Mech I/F P.C.Board. as

shown in Figure 6-3-1.

5. Unscrew the 2 screws (A) and remove the Take Up Brake Solenoid Base Unit as shown in Figure 6-6-1.
6. Unscrew the 2 screws (B) and remove the Take Up Brake Solenoid from Take Up Brake Solenoid Base Unit as shown in Figure 6-6-1.

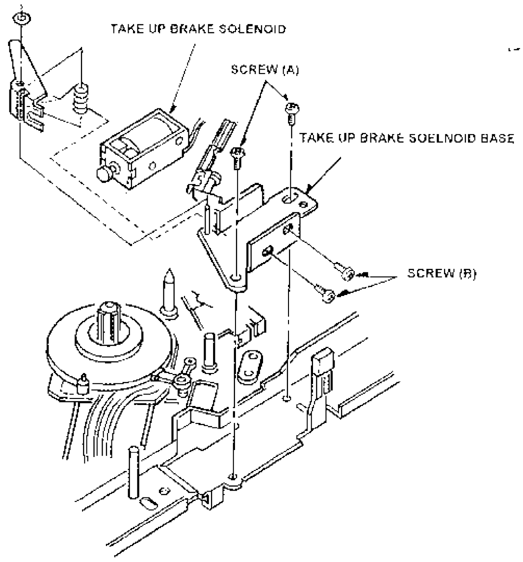


Fig.6-6-1 Removal of Take Up Brake Solrnoid

(Installation)

1. Install the new Take up Brake Solenoid follow the removal steps in reverse order.
   Note:
   Hang on the Take up Brake Spring as shown in Figure 6-6-1.
2. After installation, position adjustment should be performed as follows.

(Adjustment)

Please adjust the position of Take up Brake Solenoid Unit follow the adjustment procedure, which is described item 6-5.

3.6.7. Pinch Solenoid Replacement

(Removal)

1. Remove the Top Panel.

2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P20 on the Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Unscrew the 2 screws (A) and remove the Pinch Solenoid Unit as shown in Figure 6-7-1.
6. Unscrew the 2 screws (B) and remove the Pinch Solenoid Angle as shown in Figure 6-7-1.
7. Unscrew the 2 screw s (C) and remove the Pinch Solenoid from the Pinch Solenoid Base.

(Installation)

1. Install the new Pinch Solenoid follow the removal steps in reverse order.
2. After installation, Pinch Solenoid Position Adjustment is required (Refer to item 5-2).

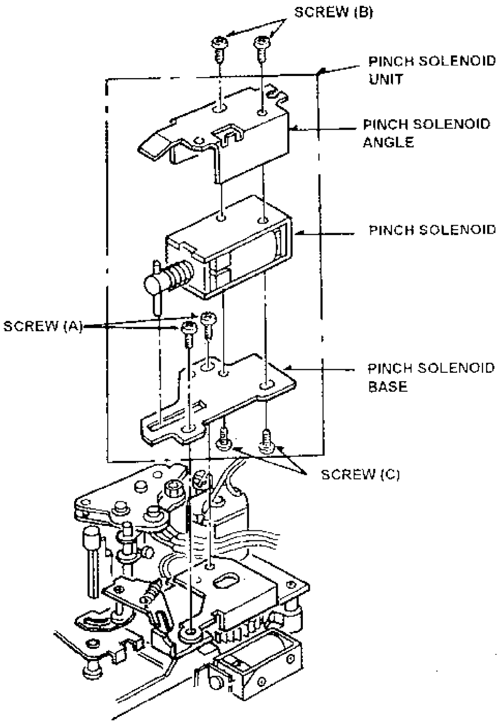

SCREW (B)
PINCH SOLENOID UNIT
PINCH SOLENOID ANGLE
PINCH SOLENOID
SCREW (A)
PINCH SOLENOID BASE
SCREW (C)

Fig.6-7-1 Removal Pinch Solenoid

3.6.8. Pinch Arm Unit Replacement

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Remove the Bottom Panel.**
4. **Disconnect the connector P20 on the Mech I/F P.C.Board as shown in Figure 6-3-1.**
5. **Remove the Pinch Solenoid Unit (Refer to item 6-9, then hang off the Pinch Solenoid Lever as shown in Figure 6-8-1.**
6. **Remove the cut washer (A) and remove the Pinch Solenoid Lever as shown in Figure 6-8-1.**
7. **Remove the cut washer (B) and remove the Pinch Arm Unit as shown in Figure 6-8-1.**

(Installation)

Install the new Pinch Arm Unit follow the removal steps in reverse order then Pinch Solenoid Position Adjustment is necessary (Refer to item 5-2).

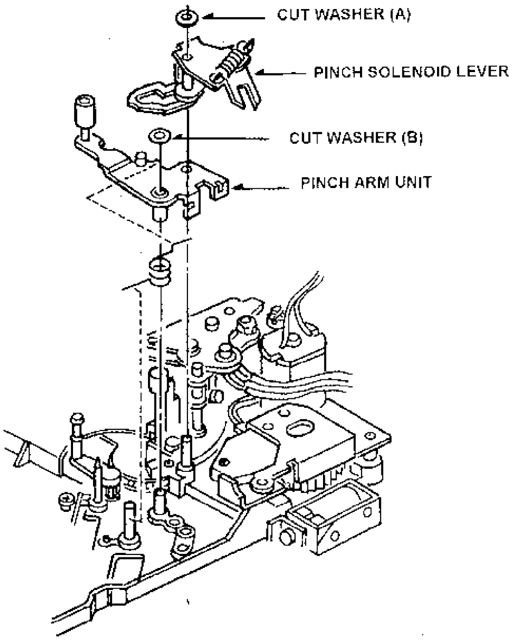


Fig.6-8-1 Removal of Pinch Arm Unit

3.6.9. Loading Motor Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P21 on Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Remove the Pinch Solenoid Unit (Refer to item 6-7).
6. Remove the Pinch Solenoid Lever. (Refer to item 6-8).
7. Unscrew the screw (B), and remove the Emergency Shaft as shown in Figure 6-9-1.
8. Unscrew the 2 screws (C) and remove the Loading Motor Neutral Unit as shown in Figure 6-9-1.
9. Unscrew the 2 screws (D) and remove the Loading Motor Unit as shown in Figure 6-9-1.

(Installation)

1. Install the new Loading Motor Unit to Loading Motor Neutral Unit by tightening 2 screws (D).
2. Install the Loading Motor Neutral Unit by tightening the 2 screws (C), then be careful that the pin of Mode SW Unit should be matched to groove position of main Cam Gear.
3. Install the Emergency Shaft by tightening the screw (B).
4. Install the Pinch Solenoid Unit and after installation it, Pinch Solenoid Position adjustment is required. (Refer to item 5-2).
5. Connect the connector P21 on the Mech I/F P.C.Board. as shown in Figure 6-3-1.

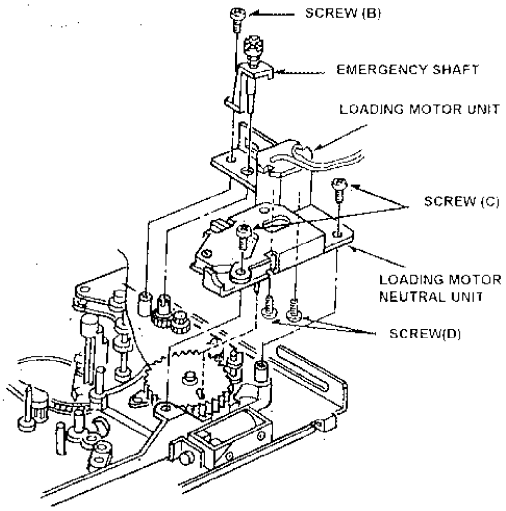

SCREW (B)
EMERGENCY SHAFT
LOADING MOTOR UNIT
SCREW (C)
LOADING MOTOR NEUTRAL UNIT
SCREW(D)

Fig. 6-9-1 Removal of Loading Motor

3.6.10. Mode Select Switch Unit Replacement

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Remove the Bottom Panel.**
4. **Disconnect the connector P22 on the Mech I/F P.C.Board as shown as Figure 6-3-1.**
5. **Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit (Refer to item 6-9).**
6. **Remove the screw (D) and remove the Mode Select Switch Unit from Loading Motor Neutral Unit as shown in Figure 6-10-1.**

(Installation)

1. **Install the New Mode Select Switch Unit follow the removal steps in reverse order (Please refer to item [6-9. Loading Motor Unit Replacement]).**
   Note:
   Be careful the pin of Mode Switch Unit should be matched to groove of Main Cam Gear.
2. **After install the Pinch Solenoid Unit, Pinch Solenoid Position**

adjustment is required (Refer to item 5-2).

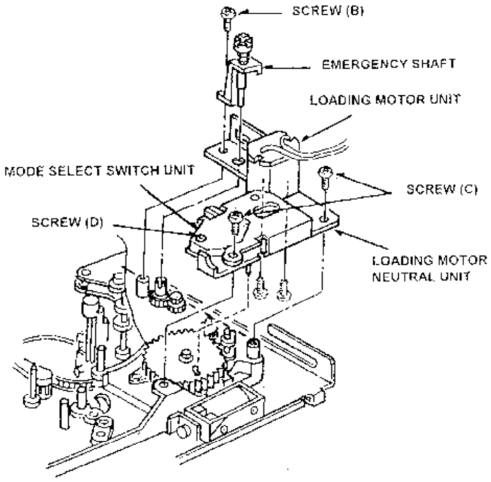

SCREW (B)
EMERGENCY SHAFT
LOADING MOTOR UNIT
MODE SELECT SWITCH UNIT
SCREW (C)
SCREW (D)
LOADING MOTOR NEUTRAL UNIT

Fig.6-10-1 Removal of mode Select Switch Unit

3.6.11. Main Cam Gear Replacement

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Remove the Pinch Solenoid Unit (Refr to item 6-7) and Loading Motor Neutral Unit (Refer to item 6-9).**
4. **Remove the Main Cam Gear as shown in Figure 6-11-1.**

(Installation)

1. **Install the Main Cam Gear, then the pin of Main Cam Arm Unit (*) should be matched with the groove position of Main Cam Gear as shown in Figure 6-11-1.**
2. **Follow the removal steps in reverse order.**
3. **After installation, Pinch Solenoid Position Adjustment is required (Refer to item 5-2).**

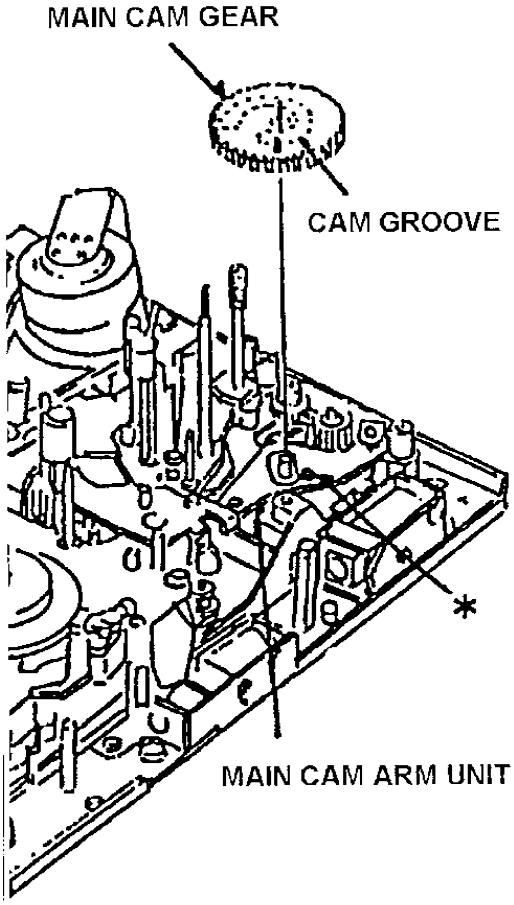


Fig.6-11-1 Removal of Main Cam Gear

3.6.12. S5 Post Base Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Unscrew the screw (A) and remove the S5 Post Base Unit as shown in Figure 6-12-1.

(Installation)

1. Install theS5 post Base Unit follow the removal steps in reverse order, then be careful the S5 Post Base Unit is install to mech chassis as shown in Figure 6-12-1.
2. After installation, Post Height pre-adjustment (Refer to item 5-4) and Linearity adjustment (Refer to item 5-12 [Tape Pass

Adjustment Procedure]) should be performed.

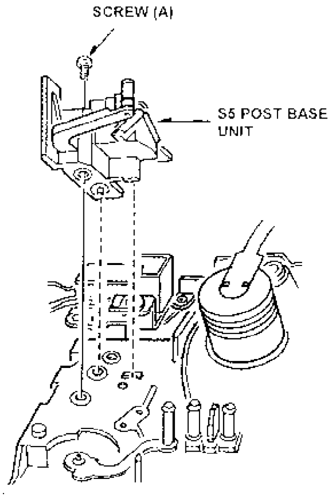


Fig.6-12-1 Removal of S5 Post Base Unit

3.6.13. Tension Arm Unit Replacement

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Remove the Cut Washer (A) and hang off the Tension Regi Spring, then remove the Tension Arm Unit as shown in Figure 6-13-1.**

(Installation)

1. **Install the new Tension Arm Unit follow the removal steps in reveres order.**
2. **After installation, Tension Arm Adjustment should be performed the following steps.**

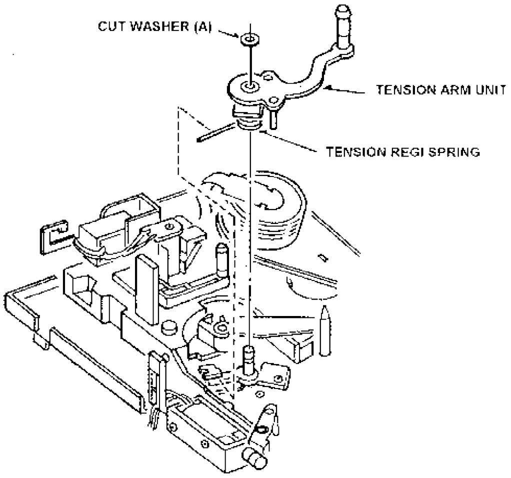
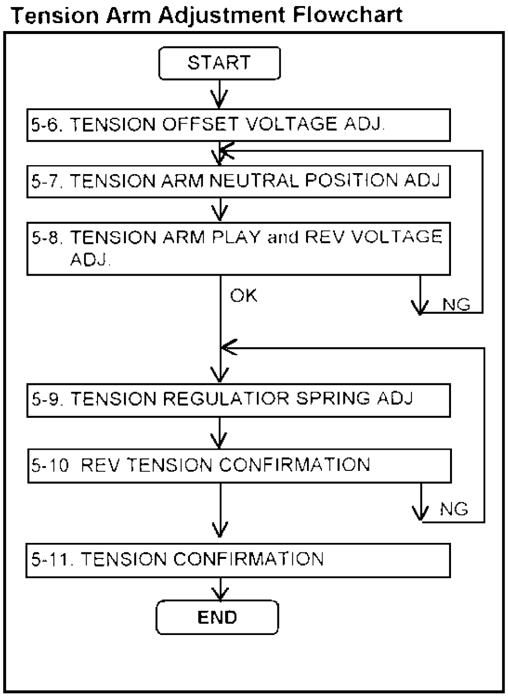

CUT WASHER (A)
TENSION ARM UNIT
TENSION REGI SPRING

Fig.6-13-1 Removal of Tension Arm Unit

Tension Arm Adjustment Flowchart


Tension Arm Adjustment Flowchart
START
5-6. TENSION OFFSET VOLTAGE ADJ.
5-7. TENSION ARM NEUTRAL POSITION ADJ
5-8. TENSION ARM PLAY and REV VOLTAGE ADJ.
OK
NG
5-9. TENSION REGULATIOR SPRING ADJ
5-10 REV TENSION CONFIRMATION
NG
5-11. TENSION CONFIRMATION
END

3.6.14. S1 Post Loading Arm Unit Replacement and Adjustment

(Removal)

1. Remove the Top Panel.

2. Remove the Front Loading Unit.

3. Remove the S5 Post Base Unit (Refer to item 6-12).

4. **Remove the Tension Arm Unit(Refer to item 6-13).**
5. **Unscrew the screw (A) and remove the S1 Post from Loading Rail as shown in Figure 6-14-1.**
6. **Remove the Cut Washer (B) and remove the S1 Loading Arm Unit as shown in Figure 6-14-1.**

(Installation)

1. **Install the new S1 Loading Arm Unit follow the removal steps in reverse order, then S1 Post Loading Arm Unit Phase Adjustment should be performed as follows.**
2. **After installation, confirm that the S1 Post moving smoothly on the Loading Rail.**
3. **Tension Arm (Refer to item 5-5), Post Height Pre-Adjustment (Refer to item 5-4) and Linearity Adjustment. (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.**

(Adjustment)

1. **When install the S1 Post Loading Arm Unit, then the hole (A) should be matched hole (B) as shown in Figure 6-14-1.**

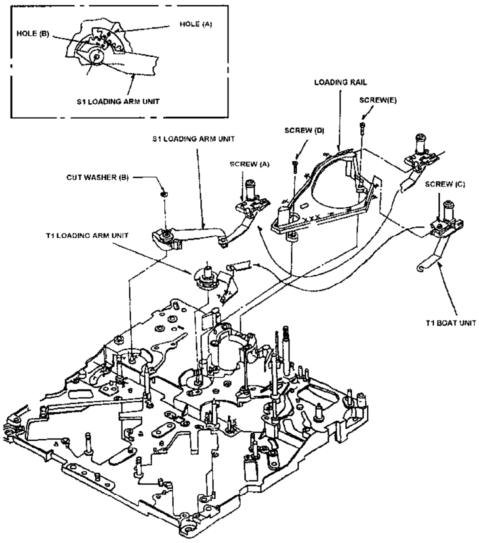

HOLE (B)
HOLE (A)
S1 LOADING ARM UNIT
LOADING RAIL
SCREW(E)
SCREW (D)
S1 LOADING ARM UNIT
SCREW (A)
CUT WASHER (B)
SCREW (C)
T1 LOADING ARM UNIT
T1 BOAT UNIT

Fig. 6-14-1 Removal of S1 Post Loading Arm Unit

3.6.15. T1 Boat Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Unscrew the screw (C) and remove the T1 Post from Loading Rail as shown in Figure 6-14-1.
4. Hang off the T1 Boat Unit from T1 Loading Arm Unit as shown in Figure 6-14-1.

(Installation)

1. Install the new T1 Boat Unit follow the removal steps in reverse order.
2. After installation confirm that the T1 Post moving smoothly on the Loading Rail.
   Linearity adjustment (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.

3.6.16. T1 Loading Arm Unit Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the cylinder Unit (Refer to item 6-1).
4. Move the T1 Post to loading direction by manual ejecting method until the screw (D) can be removal position as shown in Figure 6-14-1.
5. Unscrew the 2 screws (A) and (C), then remove the S1 and T1 Post from Loading Rail as shown in Figure 6-14-1.
6. Unscrew the 2 screws (D) and (E), then remove the Loading Rail as shown in Figure 6-14-1.
7. Remove the T1 Loading Arm Unit as shown in Figure 6-14-1.

(Installation)

1. Install the T1 Loading Arm Unit follow the removal steps in reverse order, then Phase Adjustment should be performed as follows.

Note:

This replacement should be performed simultaneously, replacement of Cylinder Unit. It is convenience for Replacement of T1 Loading Arm Unit.

(Adjustment)

1. When install the T1 Loading Arm Unit, then the hole (A) should be matched hole (B) as shown in Figure 6-16-1.
2. After installation confirm that the S1 and T1 Post moving smoothly on the Loading Rail.
3. Post Height Pre-adjustment (Refer to item 5-3) and Linearity adjustment (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.

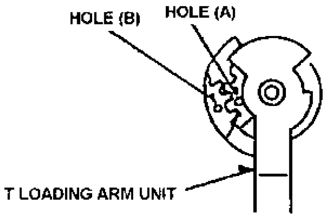


Fig.6-16-1 Phase Adjustment of T1 Lording Arm Unit

3.6.17. Cleaner Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Disconnect the connector P11 on the Mech I/F P.C.Board.
4. Unscrew the 2 screws (A) and remove the Cleaner Solenoid Unit as shown in Figure 6-17-1.
5. Unscrew the 2 screws (B) and remove the Cleaner Solenoid as shown in Figure 6-17-1.

(Installation)

1. **Install the new Cleaner Solenoid follow the removal steps in reverse order.**
2. **After installation, Cleaner Solenoid Position adjustment should be performed as follows.**

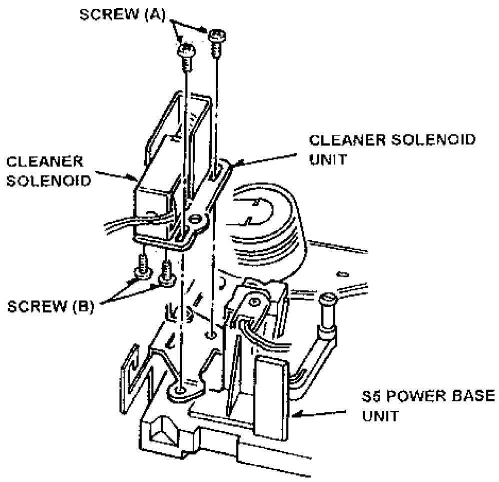


Fig.6-17-1 Removal of Cleaner Solenoid

3.6.17.1. Cleaner Solenoid Position Adjustment

*** Tools Required: Eccentric Driver (VFK0357)**

1. **Press the iron core of Cleaner Solenoid.**
2. **Observe the clearance (D) between Cleaning Arm Unit and Cleaner Base Plate as shown in Figure 6-17-2. And make sure that it is within 0.5 to 0.7mm.**
3. **If not, loosen the 2 screws (A) and adjust the position of Cleaner Solenoid Unit by moving arrow direction (C□C) using the Eccentric drive so that the clearance (D) is within specification. And tighten the 2 screws.**
4. **After adjustment, confirm that as follow.**
5. **Press the iron core of Cleaner Solenoid and released it, then the Cleaning Roller is return to original position.**
6. **Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated, when the Cylinder is rotated by hand.**

Note:
If remove the cleaner Base Plate, Cleaner roller Position adjustment should be performed.

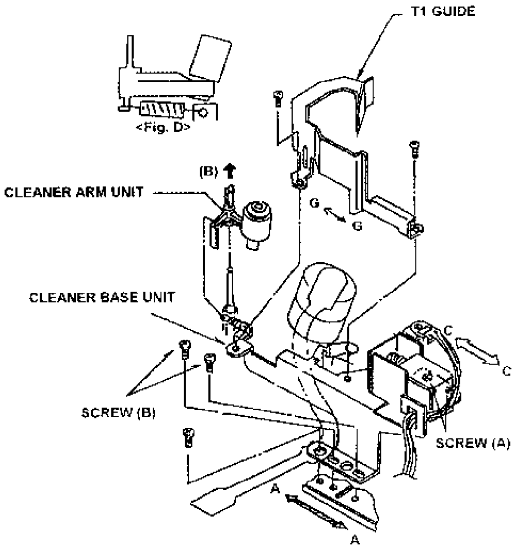

T1 GUIDE
<Fig. D>
(B)
CLEANER ARM UNIT
G
G
CLEANER BASE UNIT
C
C
SCREW (B)
SCREW (A)
A
A

Fig.6-17-2 Cleaner Solenoid Position Adjustment (1)

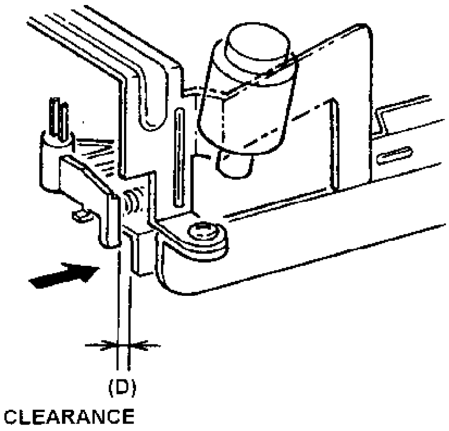

(D)
CLEARANCE

Fig.6-17-3 Cleaner Solenoid Position Adjustment (2)

3.6.17.2. Cleaner Roller Position Adjustment

*** Tools Required: Eccentric Driver (VFK0357)**

1. **Observe the clearance (A) between Cleaner Roller and cylinder Unit as shown in Figure 6-17-3. And make sure that it is within 1.0 to 1.2mm.**
2. **If not, loosen the 2 screws (B) and adjust the position of Cleaner Base Plate by moving arrow direction (A□A) using the Eccentric driver so that the clearance (A) is within specification. And tighten the 2 screws (B).**

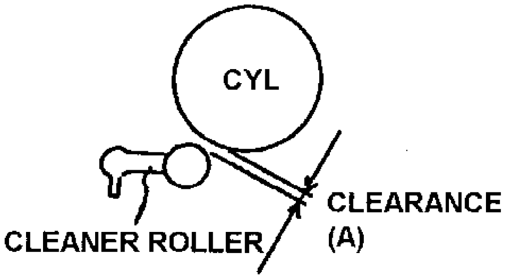


Fig.6-17-4 Cleaner Roller Position Adjustment

3.6.18. M-Stopper Solenoid Replacement and Adjustment

(Removal)

1. **Remove the Top Cover.**
2. **Remove the Front Loading Unit.**
3. **Remove the connector P24 on the Mech I/F P.C.Board as shown in Figure 6-3-1..**
4. **Unscrew the 4 screws (A) and (B) and remove the M-Stopper Solenoid as shown in Figure 6-18-1.**

(Installation)

1. **Install the new M-Stopper Solenoid follow the removal steps in reverse order.**
2. **After installation, position adjustment should be performed as follows.**

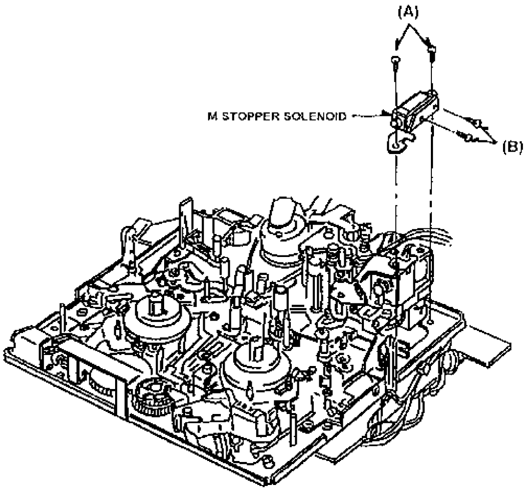


Fig.6-18-1 Removal of M-Stopper Solenoid

(Adjustment)

1. Place the reels in the L size position.
2. Push the iron core of M-Stopper Solenoid by hand.
3. Observe the clearance (A) between Mech Chassis and M-Stopper as shown in Figure 6-18-2. And make sure that it is within 1.1 to 1.3mm.
4. If not, loosen the 2 screws (A), which fixed M-Stopper Solenoid. And adjust the position of M-Stopper Solenoid so that the clearance (A) is within specification. And tighten the 2 screws (A).

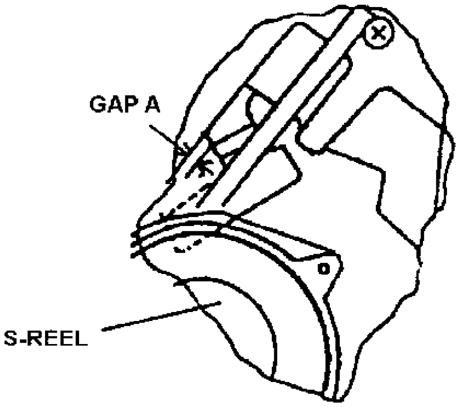


Fig.6-18-2 M-Stopper Solenoid Position Adjustment

3.6.19. Distinction SW Unit Replacement

(Removal)

1. Remove the Top Case Unit.
2. Remove the Front Loading Unit.
3. Remove the Bottom Case Unit.
4. Open the P.C.Board Unit and remove the Shield Plate.
5. Disconnect the connector P17 on Servo P.C.Board.
6. Unscrew the 3 screws (A) and remove the Distinction SW Unit as shown in Figure 6-19-1.

(Installation)

1. **Install the new Distinction Switch Unit follow the removal steps in reverse order.**
2. **Confirm that the M and L cassettes touch to Distinction Switch Unit correctly.**

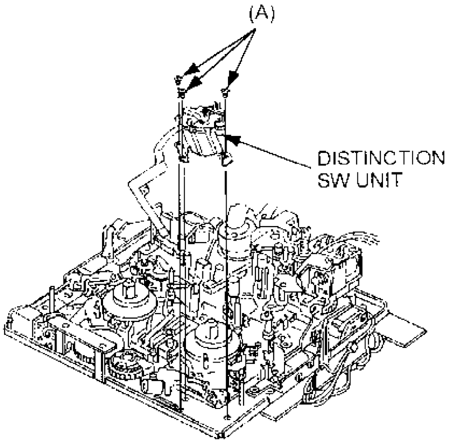


Fig. 6-19-1 Removal of Distinction Switch Uni

3.6.20. Reel Drive Motor Unit Replacement

(Removal)

1. **Remove the Top Cover.**
2. **Remove the Front Loading Unit.**
3. **Disconnect the connector P16 on the Mech I/F P.C.Board. as shown in Figure 6-3-1.**
4. **Unscrew the 2 screws (A) and remove the Reel Drive Sensor P.C.Board as shown in Figure 6-19-1.**
5. **Unscrew the 2 screws (B) and remove the Reel Drive Motor Unit as shown in Figure 6-20-1.**

(Installation)
Install the new Reel Drive Motor Unit follow the removal step in reverse order.

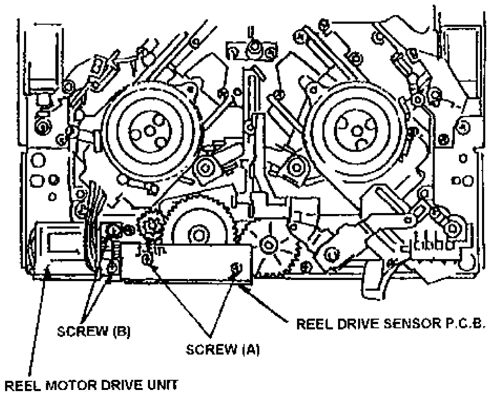

SCREW (B)
SCREW (A)
REEL DRIVE SENSOR P.C.B.
REEL MOTOR DRIVE UNIT

Fig.6-20-1 Removal of Reel Drive Motor Unit

3.6.21. L-M Release Angle Unit Replacement

(Removal)

1. **Remove the Top Panel.**
2. **Remove the Front Loading Unit.**
3. **Unscrew the 2 screws (A) and remove the L-M Release Angle Unit as shown in Figure 6-21-1.**

(Installation)

1. **Install the new L-M Release Angle Unit follow the removal steps reverse order.**

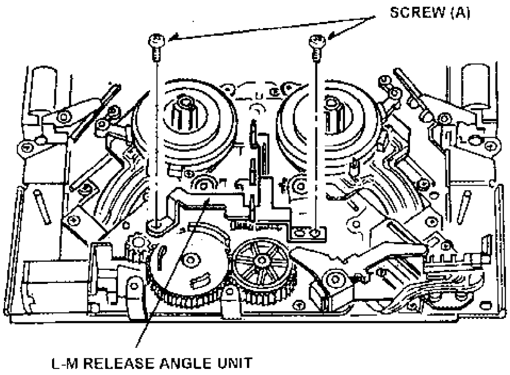

SCREW (A)
L-M RELEASE ANGLE UNIT

Fig.6-21-1 Removal of L-M Release Angle Unit

3.6.22. Slide Rod Unit Replacement and Adjustment

(Removal)

1. **Remove the Top Panel.**

2. Remove the Front Loading Unit.
3. Remove the L-M Release Angle Unit. (Refer to item 6-21).
4. Remove the Reel Drive Sensor P.C.Board (Refer to item 6-20).
5. Remove the Cut Washer (A) and remove the Reel Drive Cam Gear.
6. Remove the Cut Washer (B) and remove the MIC Drive Arm Unit.
7. Remove the Cut Washer (C) and remove the MIC Geneva Gear.
8. Remove the Cut Washer (D) and remove the Reel Drive Arm Unit as shown in Figure 6-22-2.
9. Remove the Supply and Take Up Reel Rotor Unit (Refer to item 6-3).
10. Remove the 2 Cut Washers (E) and remove the Supply and Take Up Base Drive Arm Unit.
11. Remove the 2 Cut Washers (F) and remove the Slide Rod Unit.

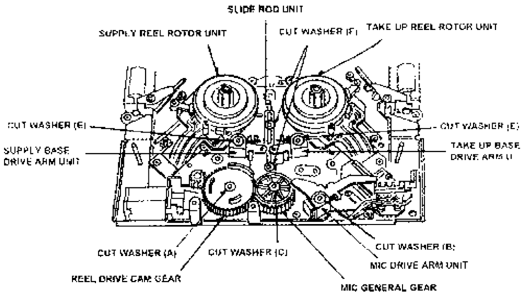

SLIDE ROD UNIT
SUPPLY REEL ROTOR UNIT
CUT WASHER (F)
TAKE UP REEL ROTOR UNIT
CUT WASHER (E)
SUPPLY BASE DRIVE ARM UNIT
CUT WASHER (E)
TAKE UP BASE DRIVE ARM U
CUT WASHER (A)
CUT WASHER (C)
CUT WASHER (B)
MIC DRIVE ARM UNIT
REEL DRIVE CAM GEAR
MIC GENERAL GEAR

Fig.6-22-1 Removal of Slide Rod Unit

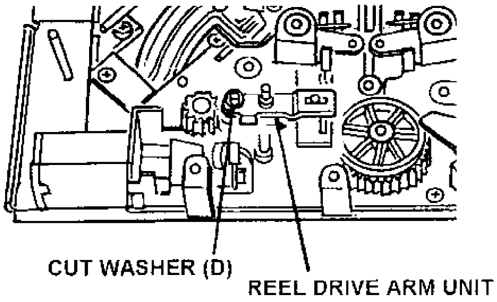

CUT WASHER (D)
REEL DRIVE ARM UNIT

Fig.6-22-2 Removal of Reel Drive Arm Unit

(Installation)

1. Install the new Slide Rod Unit follow the removal steps in reverse order.

2. **When install the Reel Drive Cam Gear and MIC Geneva Gear, then phase adjustment should be performed as follows.**

(Adjustment)

1. **Install the MIC Geneva Gear to the Chassis.**
2. **Place the Reels in the M-Size position by hand.**
3. **Install the MIC Drive Arm Unit.**
4. **Place the REC Inhibit SW in front position on Distinction SW Unit by rotation of MIC Geneva Gear, and then MIC Geneva Gear should be positioned as shown in Figure 6-22-2.**

   Note:

   Protrusion of MIC DRIVE Arm Unit is positioned as shown in Figure 6-22-2.

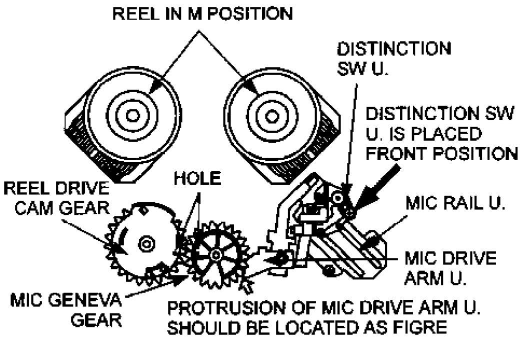

REEL IN M POSITION
DISTINCTION SW U.
DISTINCTION SW U. IS PLACED FRONT POSITION
REEL DRIVE CAM GEAR
HOLE
MIC RAIL U.
MIC DRIVE ARM U.
MIC GENEVA GEAR
PROTRUSION OF MIC DRIVE ARM U. SHOULD BE LOCATED AS FIGRE

Fig.6-22-3 Gear Phase Adjustment

5. **Install the Reel Drive Cam Gear and hole of Reel Drive Cam Gear should be matched with the hole of MIC Geneva Gear as shown in Figure 6-22-3.**
6. **Install the Cut Washer (A), (B) and (C) as shown in Figure 6-22-1.**

***Point of Adjustment**

1. **Reel in M-Seze position.**
2. **Set the REC Inhibit SW in front position of Distinction SW Unit..**
3. **Portrusion of MIC Drive Arm Unit is positioned as shown in Figure 6-22-3.**

4. Holes between Reel Drive Cam Gear and MIC Geneva Gear are matched.

3.6.23. T4 Post Phase Adjustment

1. Place unit into unloading condition.
2. Confirm that the hole (B) of T4 connection Gear was matched to hole of T4 post as shown in figure 6-23-1.
3. Confirm that the portion (C) of T4 connection Gear and hole (A) , which are located as shown in figure 6-23-1.
4. If not, adjust the phase of T4 post follow the above procedure.

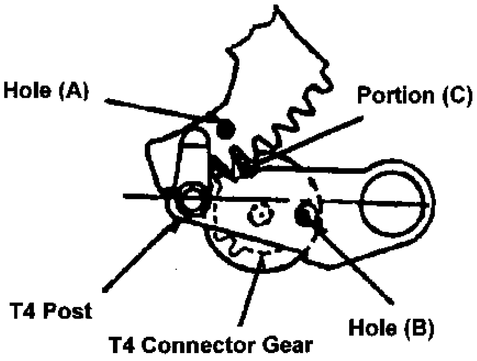


Fig.6-23-1 Phase of T4 Post

3.6.24. Thrust Adjustment Screw Replacement and Adjustment

1. Remove the Thrust Adjustment Screw.
2. Enforce cleaning of point department of capstan shaft with an applicator.
3. Put the oil(VFK0906) on a new Thrust Adjustment Screw and install the upper end of the Capstan Housing.
4. Turn the Thrust Adjustment Screw slowly to counter-clockwise until the Capstan Rotor just starts turning (separate from the Capstan Rotor).
5. Turn the Trust Adjustment Screw an another angle of 270° from 180°(about 225°) clockwise as shown in Fig. 6-24-2.
6. Put the glue (Ex:: Three Bond 1401B) on the Thrust Adjust Screw.
7. Confirm whether the Oil Seal does not come in contact with the Capstan Housing.

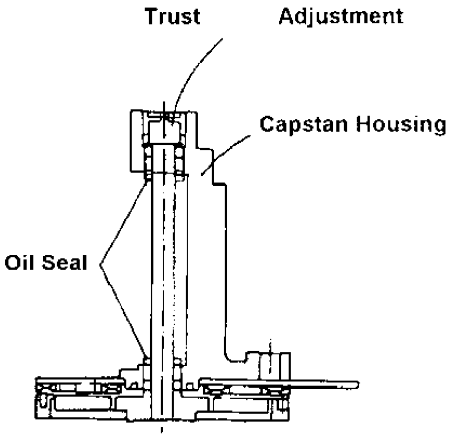

Trust
Adjustment
Capstan Housing
Oil Seal

Fig.6-24-1 Removal of Trust Adjustment Screw

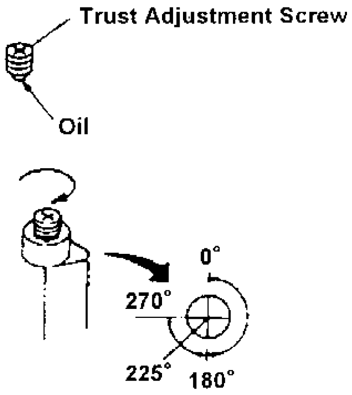

Trust Adjustment Screw
Oil
0°
270°
225°
180°

Fig.6-24-2 Adjustment of Thrust Adjustment Screw

4. Electrical Adjustment

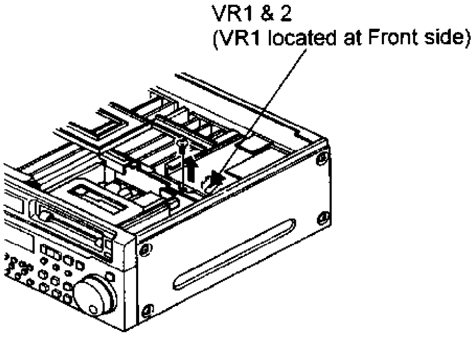
4.1. POWER

4.1.1. +5V and +12V Confirmation & Adjustment

BOARD	POWER 2
SPEC.	5V: 5.1V±0.1V 12V: 11.8V±0.6V
TEST	TP6 (+5V), TP12 (+12V) (SYSCON BOARD: F2)
ADJUST	VR1 (+5V), VR2 (+12V)
INPUT	———
MODE	EJECT
M.EQ	Digital Volt Meter

1. After connect the test point on SYSCON Board, turn the power ON.

2. Confirm that the voltage at TP6 and 12 in the specification.
3. If it is not, adjust VR1 and VR2 so that the voltage in the specification.



4.2. SYSTEM CONTROL

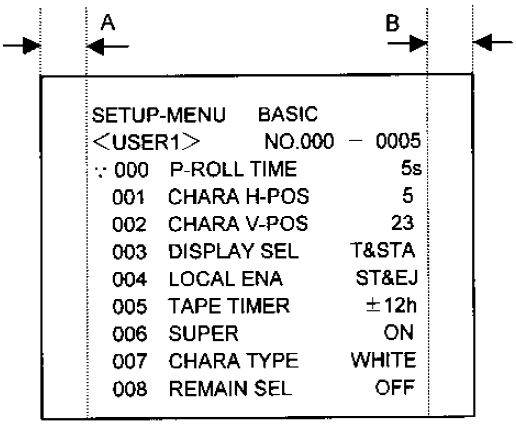
4.2.1. Super Impose Position Adjustment

BOARD	SYSCON (F2)
SPEC.	A = B
TEST	MONITOR
ADJUST	VC1
INPUT	———
MODE	EJECT
M.EQ	Monitor TV

1. Press the MENU, and displayed the SETUP-MENU.
2. Adjust VC1 so that the width A and B are equal.
3. Press the MENU button, and finished the SETUP-MENU.
4.

NOTE:

The display of menu may be different the above figure.



SETUP-MENU BASIC
<USER1> NO.000 – 0005
∵ 000 P-ROLL TIME 5s
001 CHARA H-POS 5
002 CHARA V-POS 23
003 DISPLAY SEL T&STA
004 LOCAL ENA ST&EJ
005 TAPE TIMER ±12h
006 SUPER ON
007 CHARA TYPE WHITE
008 REMAIN SEL OFF

4.3. MECH INTERFACE

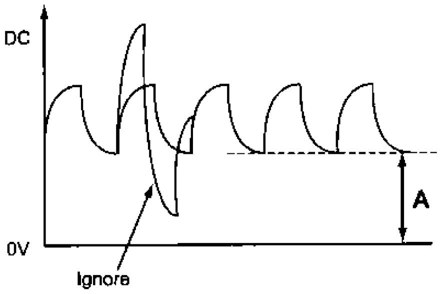
4.3.1. Photo Sensor Voltage Adjustment

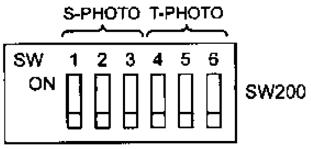
BOARD	**MECH INTERFACE**
SPEC.	**A = 3.0˜4.3VDC**
TEST	**Foil Pattern of TP13 (Supply)** **Foil Pattern of TP14 (Take Up)** **(SYSCON BOARD)**
ADJUST	**DIP SW200 (MECH I/F BOARD)**
INPUT	———
MODE	**EJECT**
M.EQ	**Oscilloscope** **VFK1423 (Tape Big./End Det. Cassette)**

1. Remove the Bottom Panel.

2. Insert the VFK1423 and measure the voltage at TP13 and TP14.

3. Set the Dip SW200 so that the DV voltage "A" in the specification.





SW1	SW2	SW3	S-PHOTO	Synthetic Resistance
SW4	SW4	SW5	T-PHOTO	
1	1	1	A Voltage	420Ω
0	1	1	UP	460Ω
1	0	1	↑	660Ω
0	0	1		750Ω
1	1	0		880Ω
0	1	0	↓	1050Ω
1	0	0	A Voltage	3300Ω
0	0	0	DOWN	8200Ω

✱: 1=ON, 0=OFF

4.4. SERVO

4.4.1. Motor Torque Offset Adjustment

BOARD	**SERVIO (F1)**
SPEC.	**15±2grcm (5 times average)**
TEST	**Connect Monitor TV to VIDEO OUT3**
ADJUST	**A03: T-REEL TRQ** **A04: S-REEL TEQ** **(EVR on Service Menu)**
INPUT	———
MODE	**EJECT**
TAPE	**No Tape**
M.EQ	**VFK1191 (Dial Torque Gauge)** **VFK1152 (Dial Torque Gauge Adapter)**

1. **Set the REEL TABLE to M-cassette position.**
2. **Remove the Front Loading Unit with the connection cable or remove the Top Plate of Front Loading Unit, which is fixed by 6 screws.**
3. **Open the SERVO ADJUST menu on the Service menu and select the item “A03: T REEL TRQ”.**
4. **Set a Dial Torque Gauge to top of Take-up Reel Table.**
5. **Press the SEARCH button at 5 times and measure the value of Dial Torque Gauge at 5 times, then calculate the average and adjust EVR “T REEL TRQ” so that the average is in the specification.**

   Note:

   While press the SEARCH button, the REEL Table is rotated
6. **Select the item “A04: S REEL TRQ”.**

7. Set a Dial Torque Gauge to top of Take-up Reel Table.
8. Press the SEARCH button at 5 times and measure the value of Dial Torque Gauge at 5 times, then calculate the average and adjust EVR “S REEL TRQ” so that the average is in the specification.

4.5. EQ and RF Adjustment

EQ and RF adjustment can be executed by RF AUTO EQ software and RF AUTO ADJUSTMENT TOOL.

This Service Manual mention of auto adjust procedure and manual adjustment procedure.

4.5.1. AUTO ADJUSTMENT PROCEDURE

4.5.1.1. Preparation and Connection of Auto EQ Adjustment Tool

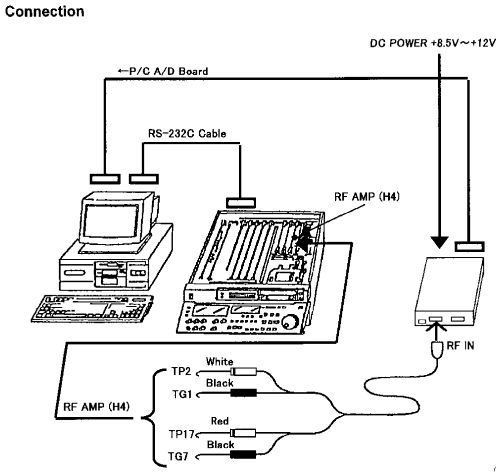
Test Point	TP2: PB HSW, TG1: GND (RF AMP Board: H4) TP17: PB ENV, TG7: GND (RF AMP Board: H4)
Equipment	● RF Auto Adjustment Tool (VFK1163) * This Tool attached 2 kinds of cable ● RF Adjustment Software (VFK1160C) ● IBM PC Compatible (486/66MHz or greater) ● DAQ-12 A/D Card (Quatech): * This Board is install to PC as same as LISTA ADJ. ● DC Power Supply (+8.5V to +12V) ● RS-232C Cable (type of Cross cable)
Tape	NTSC: VFM3580KM (DVCPRO), VFM3010EDS (DV) PAL: VFM3680KM (DVCPRO), VFM3110EDS (DV) Self-recording and Playback Tape

1. Supply DC Voltage (+8.5 to +12V) to EQ Tool. RF Adjustment Tool requires DC power supply (+8.5V to +12V). Use DC power supply or AC Adaptor movie like “VW-AMC1”.
2. Connect the extension board with RF AMP (H4) board and connect the clip of cable from EQ tool to Test Point follow as below table on the RF AMP P.C.Board.

WHITE CLIP	TP2	RED CLIP	TP17
BLACK CLIP	TG1	BLACK CLIP	TG7

3. Connect the 62 pin D-Sub connector of cable from EQ tool to A/D Board of PC.
4. Connect the RS232C cable to between VTR and PC.

Connection


Connection
DC POWER +8.5V~+12V
←P/C A/D Board
RS-232C Cable
RF AMP (H4)
RF IN
White
TP2
Black
TG1
RF AMP (H4)
Red
TP17
Black
TG7

Initial Setting
< Setting of VTR >

1. Open the Set Up Menu in User mode (do not use Service Mode) and confirm the menu is in <USER1> and set the RS-232C mode as shown below.

204	RS232C SEL	ON
205	BAUD RATE	9600
206	DATA LENGTH	8
207	STOP BIT	1
208	PARITY	NON
209	RETURN ACK	ON

2. Press SET button after setting the above items.

3. Set the LOCAL/REMOTE SW to REMOTE side.

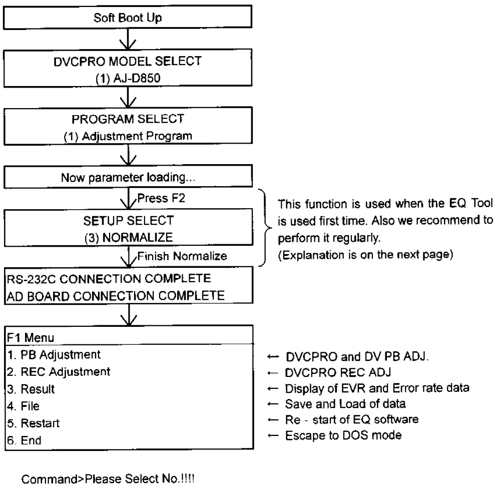
4. Set the service switch (DIP SW 1-1: located at bottom side of front panel) to on position.

During Automatic EQ adjustment, adjustment is done with ALIGNMENT tape, so rewind the necessary amount of adjustment tape (DVCPRO MASTER and DV MASTER tape) before boot up the EQ automatic adjustment software.
NOTE:
When the VTR detected tape end position during adjustment, rewind the tape automatically to tape beginning position and continuation of adjustment.
Boot Up the RF Automatic Adjustment Software.

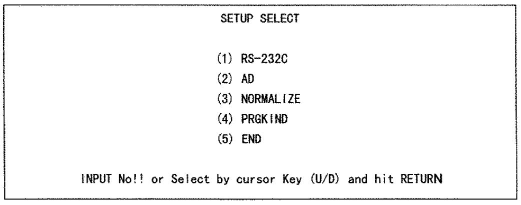
1. Boot Up the EQ Adjustment software after setting and connection.

*** Install and boot up**
Copy the all files in the floppy disk of EQ adjustment software to hard disk (for example as directly “RF ADJ” : C:\RFADJ).
Executive file is DVCRF, so type “DVCRF” and press Enter, then boot up Auto EQ software.

2. **Before boot up software, please confirm the tape does not into VTR and LOCAL/REMOTE switch on the front panel set to REMOTE side.**
3. **After boot up software, appear the message “DVCPRO MODEL SELECT” on the screen, then select the model. In case of the AJ-D850, select the item [(1) AJ-D850].**
4. **Next select item [(1) Adjusting Program] on the “PROGRAM SELECT” menu.**
5. **After item 4 the parameter loading menu is appeared and wait about 20 second. This waiting time can be skipped by pressing ENTER key. Then “RS-232C CONNECTION COMPLETE”, “AD BOARD CONNECTION COMPLETE” messages and Main Menu are appeared.**


Soft Boot Up
DVCPRO MODEL SELECT
(1) AJ-D850
PROGRAM SELECT
(1) Adjustment Program
Now parameter loading...
Press F2
SETUP SELECT
(3) NORMALIZE
Finish Normalize
This function is used when the EQ Tool is used first time. Also we recommend to perform it regularly.
(Explanation is on the next page)
RS-232C CONNECTION COMPLETE
AD BOARD CONNECTION COMPLETE
F1 Menu
1. PB Adjustment
2. REC Adjustment
3. Result
4. File
5. Restart
6. End
← DVCPRO and DV PB ADJ.
← DVCPRO REC ADJ
← Display of EVR and Error rate data
← Save and Load of data
← Re - start of EQ software
← Escape to DOS mode
Command>Please Select No.!!!!

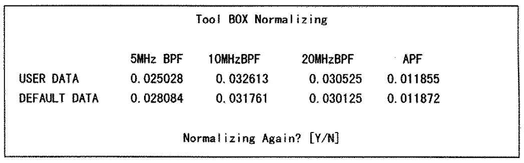
*** Normalize of RF AUTO ADJUSTMENT TOOL**



```
                    SETUP SELECT

                    (1) RS-232C
                    (2) AD
                    (3) NORMALIZE
                    (4) PRGKIND
                    (5) END

   INPUT No!! or Select by cursor Key (U/D) and hit RETURN
```

Please select the “(3) NORMALIZE”, and press Enter key, then appeared message “Play back the DVCPRO MASTER TAPE, Then PRESS ENTER Key”.
Insert DVCPRO color bar alignment tape and press Enter key, then measurement value

appeared as indicated as below.

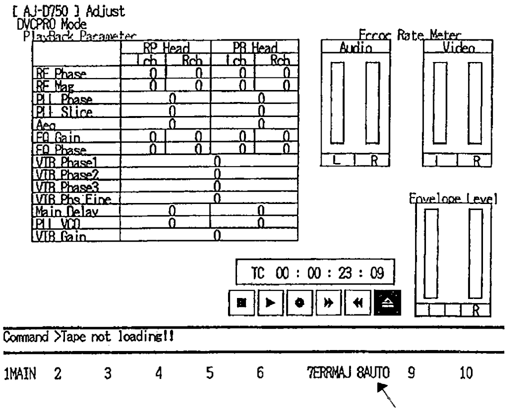


```
                    Tool BOX Normalizing

             5MHz BPF   10MHzBPF    20MHzBPF      APF
USER DATA    0.025028   0.032613    0.030525   0.011855
DEFAULT DATA 0.028084   0.031761    0.030125   0.011872

                  Normalizing Again? [Y/N]
```

When you use RF Adjustment Tool first time, please confirm that the value of USER DATA and DEFAULT DATA, which should be difference within ±0.01.
When performing this normalization regularly under condition of the same combination of the PC, A/D Board and EQ Tool, the difference of USER DATA and DEFAULT DATA should be with in ±0.005.
If USER DATA value is became out of spec, RF Adjustment Tool (VFK1163) have a problem.
In case of the data within spec, please select the "N", the appear the massage below.
Please Select (U)ser/(D)efault!
Please select "U", then appeared SETUP SELECT Menu.
Eject the tape and select "(5) END", then the screen return to parameter loading.

4.5.1.2. DVCPRO Playback Adjustment

1. **Select "1. PB Adjustment" in the Main Menu.**
2. **Adjustment menu is appeared. "Tape not loading!!" message is appeared, press F8 key (AUTO) for automatic adjustment. The bottom numbers show the Function keys.**



[AJ-D750] Adjust
DVCPRO Mode
PlayBack Parameter

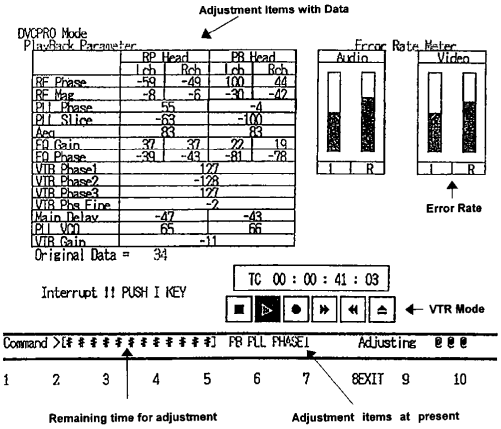
	RP Head		PB Head	
	Lch	Rch	Lch	Rch
RF Phase	0	0	0	0
RF Mag	0	0	0	0
PLL Phase	0		0	
PLL Slice	0		0	
Aeq	0		0	
EQ Gain	0	0	0	0
EQ Phase	0	0	0	0
VTR Phase1	0			
VTR Phase2	0			
VTR Phase3	0			
VTR Phs Fine	0			
Main Delay	0		0	
PLL VCO	0		0	
VTR Gain	0			

Command >Tape not loading!!

1MAIN 2 3 4 5 6 7ERRMAJ 8AUTO 9 10

F8 KEY (AUTO ADJ)

3. **In the SELECT MENU, select "1. ALL Adjustment".**
4. **Then the message of "PLEASE INSERT DVCPRO MASTER TAPE" is appeared in the former adjustment menu, insert DVCPRO MASTER (VFM3580KM : NTSC) or (VFM3680KM : PAL).**
5. **The following picture is appeared and automatic adjustment is started. During automatic adjustment, do not touch VTR and PC.**
6. **Adjustment is completed in 7 or 8 minutes. Then DV Playback adjustment is started. At bottom of the screen, "Please insert DV master Tape" is displayed.**



Adjustment Items with Data

DVCPRO Mode
PlayBack Parameter

	RP Head		PB Head	
	Lch	Rch	Lch	Rch
RF Phase	-59	-49	100	44
RF Mag	-8	-6	-30	-42
PLL Phase	55		-4	
PLL Slice	-63		-100	
Aeq	83		83	
EQ Gain	37	37	22	19
EQ Phase	-39	-43	-81	-78
VTR Phase1	127			
VTR Phase2	-128			
VTR Phase3	127			
VTR Phs Fine	-2			
Main Delay	-47		-43	
PLL VCO	65		66	
VTR Gain	-11			

Original Data = 34

Error Rate Meter

Error Rate

Interrupt !! PUSH I KEY

TC 00 : 00 : 41 : 03

■ ▷ ● ⏩ ⏪ ⏏ ← VTR Mode

Command >[# # # # # # # # # # # #] PB PLL PHASE1 Adjusting @ @ @

1 2 3 4 5 6 7 8EXIT 9 10

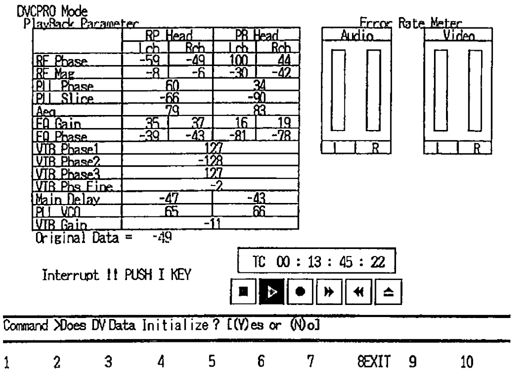
Remaining time for adjustment

Adjustment items at present

4.5.1.3. DV (Consumer) Playback Adjustment

This adjustment is done following DVCPRO Playback adjustment.

1. **Tape is automatically ejected after DVCPRO Playback Adjustment. Insert DV MASTER Tape when “Please Insert DV MASTER” message is appeared.**
2. **When “DV Data Initialize?” [(Y)es or (N)o]" message is appeared, select N.**
3. **DV Playback automatic adjustment is started.**
   During automatic adjustment, do not touch VTR and PC.



DVCPRO Mode
PlayBack Parameter

	RP Head		PB Head	
	Lch	Rch	Lch	Rch
RF Phase	-59	-49	100	44
RF Mag	-8	-6	-30	-42
PLL Phase	60		34	
PLL Slice	-66		-90	
Aeq	79		83	
EQ Gain	35	37	16	19
EQ Phase	-39	-43	-81	-78
VTR Phase1	127			
VTR Phase2	-128			
VTR Phase3	127			
VTR Phs Fine	-2			
Main Delay	-47		-43	
PLL VCO	65		66	
VTR Gain	-11			

Original Data = -49

Error Rate Meter

Interrupt !! PUSH I KEY

TC 00 : 13 : 45 : 22

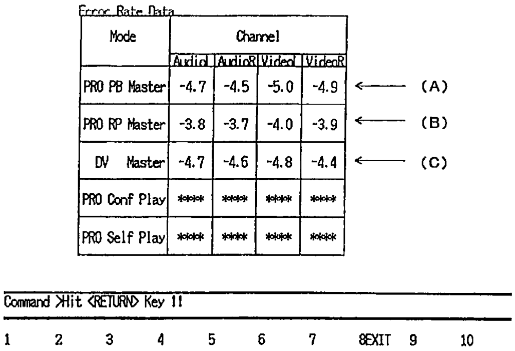
■ ▷ ● ⏩ ⏪ ⏏

Command >Does DV Data Initialize ? [(Y)es or (N)o]

1 2 3 4 5 6 7 8EXIT 9 10

4.5.1.4. Confirmation of Error Rate (PLAYBACK)

1. **After DVCPRO and DV Playback adjustment, measured error rate is automatically displayed as shown below.**



Error Rate Data

Mode	Channel				
	AudioL	AudioR	VideoL	VideoR	
PRO PB Master	-4.7	-4.5	-5.0	-4.9	← (A)
PRO RP Master	-3.8	-3.7	-4.0	-3.9	← (B)
DV Master	-4.7	-4.6	-4.8	-4.4	← (C)
PRO Conf Play	****	****	****	****	
PRO Self Play	****	****	****	****	

```
Command >Hit <RETURN> Key !!
1    2    3    4    5    6    7    8EXIT  9    10
```

2. Confirm the numbers at (A), (B) and (C) they are displayed in Green.
If the color is red the error rate is too high.
Especially the numbers at (A) and (C) must be Green. If part of row of (B) is red, clean the head and the tape transportation and re-adjust the DVCPRO RP Playback adjustment.

<Procedures>

1. If Return key is pressed, Select Menu is displayed and select "3. DVCPRO RP ONLY Adjustment". Then follow the message on PC and re-adjust RP mode only.

2. After adjustment error rate is automatically displayed.

Confirm the error rate and if they are correct, do the next adjustment.

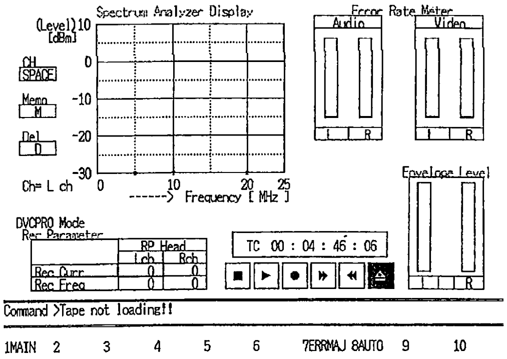
4.5.1.5. DVCPRO Recording Adjustment

Start the DVCPRO Recording Adjustment after Playback Adjustment and Error Rate Confirmation.

1. Return to Main Menu. Press Enter key on the Error Rate Display Menu and open the Sub menu.

2. Select "6. Return to manual" and press F1 key (MAIN) and return to Main Menu.

3. Select "2. REC Adjustment" and following "REC Adjustment" menu is appeared.


Spectrum Analyzer Display
(Level) 10
[dBm]
0
-10
-20
-30
CH
SPACE
Memo
M
Del
D
Ch= L ch
0
10
20
25
------> Frequency [MHz]
Error Rate Meter
Audio
Video
L
R
L
R
Envelope Level
L
R
1MAIN
2
3
4
5
6
7ERRMAJ
8AUTO
9
10

DVCPRO Mode

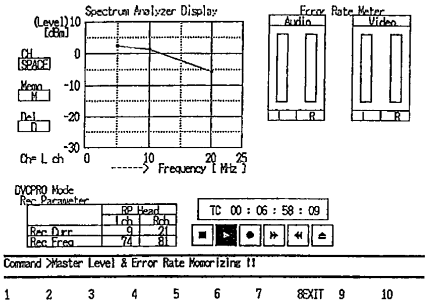
Rec Parameter

	RP Head Lch	RP Head Rch
Rec Curr	0	0
Rec Freq	0	0

TC 00 : 04 : 46 : 06

Command >Tape not loading!!

4. Tape not loading message is appeared. For the automatic adjustment press F8 key (AUTO).
5. Select "1. Adjust start" in the Sub Menu.
6. The messaged of "Please Insert DVCPRO MASTER TAPE (COLOR BAR)" is appeared, and insert the DVCPRO color bar master tape. After inserting the master tape, Master level and error rate level are automatically memorized.
7. During data memorizing, following menu is appeared and waveform is appeared in the Spectrum Analyzer Display part.


Spectrum Analyzer Display
(Level) 10
[dBm]
0
-10
-20
-30
CH
SPACE
Memo
M
Del
D
Ch= L ch
0
10
20
25
------> Frequency [MHz]
Error Rate Meter
Audio
Video
L
R
L
R
1
2
3
4
5
6
7
8EXIT
9
10

DVCPRO Mode

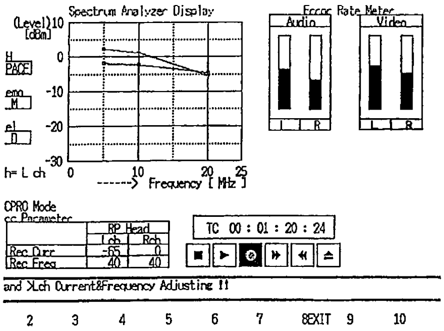
Rec Parameter

	RP Head Lch	RP Head Rch
Rec Curr	9	21
Rec Freq	74	81

TC 00 : 06 : 58 : 09

Command >Master Level & Error Rate Memorizing !!

8. Tape is ejected after completion of Master Tape Data Memorizing, and "Please Insert Blank Tape" message is appeared. Then insert self recording and playback tape.
9. Start the Automatic Adjustment.

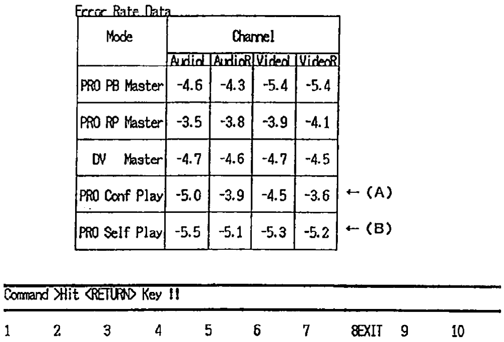

Spectrum Analyzer Display
(Level)10
[dBm]
0
-10
-20
-30
H
PACE
emo
M
el
D
h= L ch
0
10
20
25
------> Frequency [MHz]
Error Rate Meter
Audio
Video
L
R
L
R
CPRO Mode
cc Parameter
TC 00 : 01 : 20 : 24
■ ▶ ⏺ ⏩ ⏪ ⏏
2 3 4 5 6 7 8EXIT 9 10

	RP Head	
	Lch	Rch
Rec Curr	-55	0
Rec Freq	40	40

and >Lch Current&Frequency Adjusting !!

4.5.1.6. Confirmation of Error Rate (REC)

1. **After completion of Automatic Adjustment '<Return> to NEXT STEP" message is appeared, the press Return (ENTER) key.**
2. **"Please Adjust VC600 and VC601 Trimmer Volume and Minimize Error Rate!!" message is appeared. At this menu, observe the error rate at upper right part of the screen and if the error rate is too high (RED color display), adjust manually VC600 and VC601 on the RF AMP (H4) BOARD. If the error rate display changed to green, press Return (ENTER) key.**
3. **Automatically goes to Error Rate measurement mode and "Error Rate Checking!!" message is displayed.**
4. **Error rate is displayed and completion of measurement.**


Error Rate Data

Mode	Channel				
	AudioL	AudioR	VideoL	VideoR	
PRO PB Master	-4.6	-4.3	-5.4	-5.4	
PRO RP Master	-3.5	-3.8	-3.9	-4.1	
DV Master	-4.7	-4.6	-4.7	-4.5	
PRO Conf Play	-5.0	-3.9	-4.5	-3.6	← (A)
PRO Self Play	-5.5	-5.1	-5.3	-5.2	← (B)

Command >Hit <RETURN> Key !!

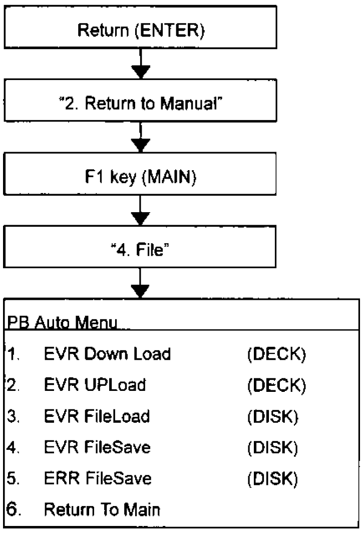
1 2 3 4 5 6 7 8EXIT 9 10

5. **The row of (A) shows the error rate for confidence playback, the row of (B) shows the error rate for self recording and playback. Confirm the numbers are displayed in Green color.**

Save RF Data and Error Rate Data

RF Adjustment result data and error rate data can be saved.

1. **Return to MAIN Menu from Recording Adjustment menu.**
2. **The procedures are show below.**

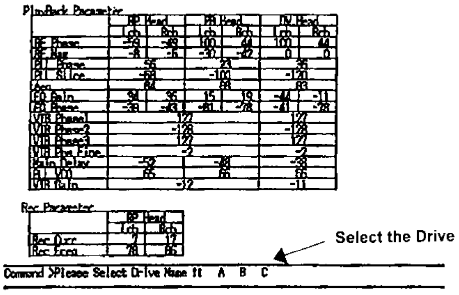


PB Auto Menu

1. EVR Down Load (DECK)
2. EVR UPLoad (DECK)
3. EVR FileLoad (DISK)
4. EVR FileSave (DISK)
5. ERR FileSave (DISK)
6. Return To Main

Command>Please Select No!!!!

3. **item 3 is EVR data loading, item 4 is EVR data saving and item 5 is Error rate data saving.**



PlayBack Parameter

	RP Head		PB Head		AV Head	
	Lch	Rch	Lch	Rch	Lch	Rch
RF Phase	-59	-49	100	44	100	44
RF Mag	-8	-5	-30	-42	0	0
PLL Phase	55		23		35	
PLL Slice	-68		-100		-120	
Agc	84		68		83	
EQ Gain	94	35	15	19	-44	-11
EQ Phase	-38	-43	-81	-78	-41	-78
VTR Phase1	127				127	
VTR Phase2	-128				-128	
VTR Phase3	127				127	
VTR Pha Fine	-2				-2	
Main Delay	-52		-48		-38	
PLL VCO	65		66		65	
VTR Gain	-12				-11	

Rec Parameter

	RP Head	
	Lch	Rch
Rec Curr	7	12
Rec Freq	78	85

Select the Drive

```
Command >Please Select Drive Name !!   A   B   C
```

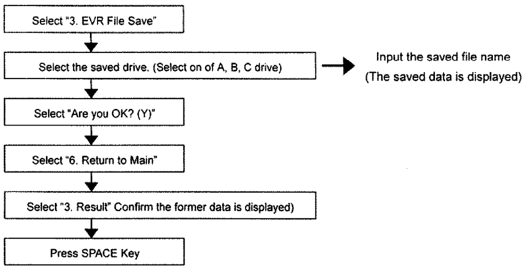
<< EVR File Save >>

1. **Select "4. EVR File Save". All parameters are displayed and select the drive for data saving.**
2. **Enter the file name and comment after selecting the drive. File name must be in 8 characters, and comment is must be in 20 characters. The adjustment data for VTR can be managed same as linearity data. After enter the File name and comment, Sub-menu is automatically displayed. Then save the EVR data.**

<< EVR File Load >>

1. **Select "3. EVR File Load (DISK)" for reading the EVR data from PC.**
2. **Select the drive follow the screen message input the saved filename, then EVR data displayed on the screen.**
3. **When escape from this EVR data display, press "Y" key follow the message "Are You OK", then return to Sub-menu (File selected**

menu)


Select "3. EVR File Save"
Select the saved drive. (Select on of A, B, C drive)
Input the saved file name
(The saved data is displayed)
Select "Are you OK? (Y)"
Select "6. Return to Main"
Select "3. Result" Confirm the former data is displayed)
Press SPACE Key

<< Save the Error Data >>

1. Displayed PB Auto Menu as the same as step of introduction << Save and Reading the EVR Data >>.
2. Select "5. ERR File Save" on the PB Auto menu.
3. The Error rate data is saved to same directly as AUTO EQ software, which is file "ERRDATA.DAT" Therefore it file can only entry the comment.
4. After input comment, Auto EQ software is executed saving operation and return to PB Auto menu.

<< Load the Error Data >>

1. The saved Error data file read on the Editor after return to Dos mode.
2. The contents of Error data file, which display from left side on the screen "date of saving (month/day/year), comment and error data.".
3. Order to display of Error data from left side, which display as numerical value of upper left (PRO PB MASTER - Audio L) on the error rate table of Auto EQ software display and next to right numerical value displayed. And next row of numerical value (PRO RP MASTER - Audio L) displayed from left to right direction. Therefore most of right side of numerical value on Editor display, which is numerical value of "PRO Self Play - Video R".

<< EVR Up Load >>

When EVR file data load to VTR from PC. First EVR file load have to executed follow the procedure on previous page.

1. Select the item "2 EVR UP Load" and press "U"Key follow the message " (D)efault or (U)ser Data Up Load".
2. After press "U" button appear the message "Up Load Complete!!

Are You OK? [(Y)es or (N)o]", then press (Y) button for up load EVR data to VTR.

<< EVR Down Load >>

Note:

The EVR data keep on EQ software until escape DOS mode after Auto EQ adjustment finished. Therefore if you want to save EVR data without execute Auto EQ adjustment, necessary EVR Down Load operation.

1. Select the item "2.EVR Down Load" and press "U" Key follow the message "(D)efault or (U)ser Down Load".
2. After press "U" button appear the message "Down Load Complete!! Are You OK? [(Y)es or (N)o]", then press (Y) button for EVR data down load to PC from VTR.

After finish EVR Down Load, perform "EVR File Save" for file save to disk drive follow the follow the procedure on previous page.

4.5.2. MANUAL ADJUSTMENT PROCEDURE

NOTE:

Setting of Service Menu correspons to setting of Front switches. (Refer to Error Rate Confirmatio
Procedure on Section 2.)

RF ADJUSTMENT

4.5.2.1. Pre EQ Adjustment

BOARD	RF AMP board (H4)
SPEC.	2.5VDC±0.2V (DVCPRO) 2.0+0.5V (DV)
TEST	TP20, TP18,TP1 and TP2 (Trigger)
ADJUST	C09:RP MAG L, C10:RP MAG R, C13:PB MAG L, C14:PB MAG R (EVR on RF ADJUST menu)
MODE	PLAY
TAPE	DV Alignment tape (NTSC: VFM3010EDS, PAL: VFM3110EDS) DVCPRO Alignment tape (NTSC: VFM3580KM, PAL: VFM3680KM)
M.EQ	Oscilloscope Monitor TV (Connect to VIDEO 3 OUT)

1. Open the RF ADJUST menu on the Service Menu.
2. Connect the Scope to TP1 for trigger.
3. Connect the Scope to TP20 with 10:1 probe and connect the

ground to TG9.

4. Playback a colour bar portion of the DV Alignment Tape.
5. Adjust EVR "C09:RP MAG L" and "C10:RP MAG R" so that the DC voltage is become 2.0V+0.5V.
6. Playback a colour portion of DVCPRO Alignment Tape.
7. Adjust EVR "C09:RP MAG L" and "C10:RP MAG R" so that the DC voltage is become 2.5V+0.5V.
8. Connect the scope to TP18 with 10:1 probe and connect the ground to TG9.
9. Connect the scope to TP2 for trigger.
10. Adjust EVR "C13:PB MAG L" and EVR "C14:PB MAG R" so that the DC voltage is become 2.0V+0.5V.

Note: How to adjust the EVR.

(1) Press the MENU button on the front bottom panel, then "Service Menu" appeared on the screen.
(2) Select the item "C00: RF ADJUST" by JOG Dial and press the SET button on the front bottom panel then open "RF ADJUST" menu.
(3) Select the adjustment item by JOG Dial, then move The start mark (T) to the adjusting item.
(4) Adjustment became available by pressing JOG/SHTL button, then rotating JOG Dial.

4.5.2.2. RF AMP PB Phase Adjustment

BOARD	RF AMP board (H4)
SPEC.	Minimum of Error Rate
TEST	Front Display
ADJUST	C07:RP PHASE L, C08:RP PHASE R C11:PB PHASE L, C12:PB PHASE R (EVR on RF ADJUST menu)
MODE	PLAY
TAPE	DV Alignment tape (NTSC: VFM3010EDS, PAL: VFM3110EDS) DVCPRO Alignment tape (NTSC: VFM3580KM, PAL: VFM3680KM)
M.EQ	Monitor TV (Connect to VIDEO 3 OUT)

1. Set the switches as shown below
   Front Bottom CF:4F
2. Open the RF Adjust menu on the Service menu and set as follows.

C20 ERROR MODE	FAST
C19 PB MODE	RP H
C18 VITERBI MODE	ON
C17 CONCEAL MODE	OFF
C16 ECC MODE	AL OFF

3. Playback the DV colour bar portion of Alignment Tape.
4. Adjust EVR “C07: RP PHASE L” and “C08:RP PHASE R” so that the error rate is minimum.
5. Playback the colour bar portion of DVCPRO Alignment tape.
6. Adjust EVR “C07:RP PHASE L” and “C08:RP PHASE R” so that the error rate is minimum.
7. Set the item “C19:PB MODE” to PB H.
8. Adjust “C11:PB PHASE L” and “C12:PB PHASE R” so that the error rate is minimum.

4.5.3. EQ ADJUSTMENT

4.5.3.1. PLL Lock Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	———
TEST	TP403, Monitor
ADJUST	VR410, B01:PB PLL PHASE, B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV Oscilloscope

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service Menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape and confirm the picture is appeared on the monitor.
4. If picture is not appeared, adjust following items
   (1) Connect the scope to TP403 and adjust VR410 so that the DC voltage is become 2.1VDC.
   (2) Adjust "B01:PB PLL PHASE" and "B02:PB PLL SLICE" so that the picture appears on the monitor.
5. Repeat STOP to PLAY mode, and confirm the Picture is surely appeared every time.

4.5.3.2. PLL Latch Phase Coarse Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B01:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust "B01:PB PLL PHASE" so that the video error rate becomes

minimum.

4.5.3.3. PLL Slice Level Coarse Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.

4. Adjust “B02:PB PLL SLICE” so that the video error rate becomes minimum.

4.5.3.4. EQ Adjustment (1) (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B19:PB MAIN DL (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.

4. Adjust "B19:PB MAIN DL" so that the video error rate is minimum.

4.5.3.5. EQ Adjustment (2) (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B03:PB AEQ, B04:PB GAIN L, B05:PB PHASE L, B06:PB GAIN R, B07:PB PHASE R (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.

4. Adjust each adjustment item so that the each portions error rate becomes minimum as shown in the table.

Procedures	Adjust VR	Error Rate Portion
1	PB AEQ	VIDEO R & L CH
2	PB GAIN L	VIDEO L CH
3	PB PHASE L	VIDEO L CH
4	PB GAIN R	VIDEO R CH
5	PB PHASE R	VIDEO R CH

4.5.3.6. PLL Latch Phase Fine Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B01:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. **Set the Error Rate display mode.**
2. **Open the EQ ADJUST menu on Service menu and set as follows.**

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. **Playback the Alignment tape.**
4. **Adjust “B01:PB PLL PHASE” so that the video error rate becomes minimum.**

4.5.3.7. PLL Slice Level Fine Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. **Set the Error Rate display mode.**
2. **Open the EQ ADJUST menu on Service menu and set as follows.**

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. **Playback the Alignment tape.**
4. **Adjust “B02:PB PLL SLICE” so that the video error rate becomes minimum.**

4.5.3.8. Viterbi A/D Input Level Adjustment

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Center of VR409 pattern Error Rate Level Meter (Front display)
ADJUST	B23:VITABI GAIN, VR801, (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

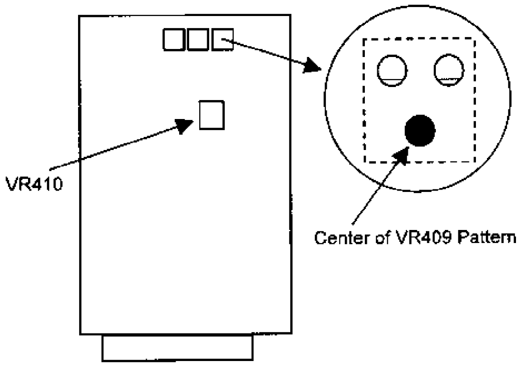
1. **Set the Error Rate display mode.**
2. **Open the EQ ADJUST menu on Service menu and set as follows.**

B28 ERROR MODE	**FAST**
B27 PB MODE	**RP H**
B26 VITERBI MODE	**ON**
B25 CONCEAL MODE	**OFF**
B24 ECC MODE	**AL OFF**

3. Playback the Alignment tape.

4. Adjust “B23:VTB GAIN” so that the video error rate becomes minimum.

5. Connect the Electric Volt Meter to “Center of VR409 Pattern” as shown as below figure and confirm the DC voltage is 2.1V DC to 2.4VDC. If it is not, adjust VR801.



EQ (H3) Board. Parts side

4.5.3.9. PLL Lock Adjustment (R/P)

BOARD	**EQ Board (H3)**
SPEC.	**———**
TEST	**TP203, Monitor TV**
ADJUST	**VR210, B08:RP PLL PHASE, B09:RP PLL SLICE (EVR on EQ ADJUST menu)**
INPUT	**———**
MODE	**PLAY**
TAPE	**NTSC: VFM3580KM PAL: VFM3680KM**
M.EQ	**Monitor TV**

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape and confirm the picture appears on the monitor.
4. If the picture is not appeared adjust following items.
   (1) Connect the Electric Volt Meter to TP203 and adjust VR210 so that the DC voltage is 2.1VDC.
   (2) Adjust “B08:RP PLL PHASE” and “B09:RP PLL SLICE so that the picture appears on the monitor.
5. Repeat STOP to PLAY and confirm the picture is surely appeared.

4.5.3.10. PLL Latch Phase Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B08:RP PLL PHASE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B08:RP PLL PHASE” so that the video error rare is minimum.

4.5.3.11. PLL Slice Level Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B09:RP PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B09:RP PLL SLICE” so that the video error rare is minimum.

4.5.3.12. EQ Adjustment (1) (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B20:RP MAIN DL (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. **Set the Error Rate display mode.**
2. **Open the EQ ADJUST menu on Service menu and set as follows.**

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. **Playback the Alignment tape.**
4. **Adjust “B20:RP MAIN DL” so that the video error rare is minimum.**

4.5.3.13. EQ Adjustment (2) (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B10:RP AEQ, B11:RP GAIN L, B12:RP PHASE L, B13:RP GAIN R B14:RP PHASE R (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. **Set the Error Rate display mode on VTR.**
2. **Open the EQ ADJUST menu on Service menu and set as follows.**

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. **Playback the Alignment tape.**
4. **Adjust the each EVR so that the error rate is minimum.**

Procedures	Adjust VR	Correspond of Error Rate Portion
1	RP AEQ	VIDEO R & L CH
2	RP GAIN L	VIDEO L CH
3	RP PHASE L	VIDEO L CH
4	RP GAIN R	VIDEO R CH
5	RP PHASE R	VIDEO R CH

4.5.3.14. PLL Latch Phase Fine Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B08:RP PLL PHASE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust RP PLL PHASE so that the error rate is minimum.

4.5.3.15. PLL Slice Level Fine Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B09:RP PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.

4. Adjust “B09:RP PLL SLICE” so that the error rate is minimum.

4.5.3.16. PLL Lock Confirmation (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	———
TEST	Monitor TV
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape and confirm the picture appears on the monitor.
If picture is not appeared adjust “B02:PB PLL SLICE.” so that the picture appears on the monitor.

4. Repeat STOP to PLAY and confirm the picture is surely appeared.

4.5.3.17. PLL Slice Level Coarse Adjustment (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.

4. Adjust “B02:PB PLL SLICE”, so that the video error rate is minimum.

4.5.3.18. EQ Adjustment (1) (Consumer DV)

BOARD	**EQ (H3)**
SPEC.	**Error Rate Minimum**
TEST	**Error Rate Level Meter (Front display)**
ADJUST	**B19:PB MAIN DL (EVR on EQ ADJUST menu)**
INPUT	**———**
MODE	**PLAY**
TAPE	**(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS**
M.EQ	**Monitor TV**

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	**FAST**
B27 PB MODE	**RP H**
B26 VITERBI MODE	**OFF**
B25 CONCEAL MODE	**OFF**
B24 ECC MODE	**AL OFF**

3. Playback the Alignment tape.

4. Adjust "B19:PB MAIN DL" so that the video error rate is minimum.

4.5.3.19. EQ Adjustment (2) (Consumer DV)

BOARD	**EQ Board (H3)**
SPEC.	**Error Rate Minimum**
TEST	**Error Rate Level Meter (Front display)**
ADJUST	**B03:PB AEQ, B04:PB GAIN L, B05:PB PHASE L, B06:PB GAIN R, B07:PB PHASE R (EVR on EQ ADJUST menu)**
INPUT	**———**
MODE	**PLAY**
TAPE	**(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS**
M.EQ	**Monitor TV**

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	**FAST**
B27 PB MODE	**RP H**
B26 VITERBI MODE	**OFF**
B25 CONCEAL MODE	**OFF**
B24 ECC MODE	**AL OFF**

3. Playback the Alignment tape.

4. Adjust each EVR so that the error rate is minimum.

Procedures	Adjust VR	Correspond of Error Rate Portion
1	PB AEQ	VIDEO R & L CH
2	PB GAIN L	VIDEO L CH
3	PB PHASE L	VIDEO L CH
4	PB GAIN R	VIDEO R CH
5	PB PHASE R	VIDEO R CH

4.5.3.20. PLL Slice Level Fine Adjustment (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B08:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.

2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	**FAST**
B27 PB MODE	**RP H**
B26 VITERBI MODE	**OFF**
B25 CONCEAL MODE	**OFF**
B24 ECC MODE	**AL OFF**

3. Playback the Alignment tape.

4. Adjust “B08:PB PLL SLICE” so that the video error rate becomes

minimum.

4.5.3.21. Consumer DV Viterbi Confirmation

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B23:VTB GAIN, B01:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	———
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28 ERROR MODE	FAST
B27 PB MODE	RP H
B26 VITERBI MODE	OFF
B25 CONCEAL MODE	OFF
B24 ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Confirm the error rate is improved by Viterbi on.
   The improvement can be confirmed by the error rate meter decrease 5 scale on the front audio meter.
5. If the error rate is not improved so much, adjust “B23:VTB GAIN” and “B01:PB PLL PHASE”.

4.5.3.22. Final confirmation of Error Rate.

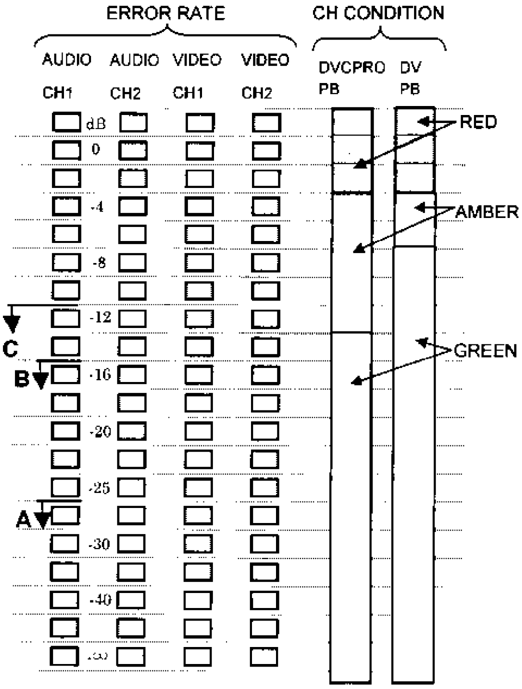
BOARD	EQ Board (H3)
SPEC.	DVCPRO (PB mode) : under the A
	DVCPRO (Confi mode) :under the C
	DV (PB mode) : under the B
TEST	Error Rate Level Meter (Front display)
MODE	PLAY, REC
TAPE	(DVCPRO Alignment Tape) NTSC: VFM3580KM, PAL: VFM3680KM (Consumer DV Alignment Tape) NTSC:VFM3110EDS, PAL:VFM3110EDS Blank Tape
M.EQ	Monitor TV

1. Set the Error Rate display mode

2. Open the EQ ADJUST menu on Service menu and set as follows.

ITEM of the MENU	DVCPRO	DV
B28: ERROR MODE	FAST	FAST
B27: PB MODE	PB H	RP H
B26: VITERBI MODE	ON	ON
B25: CONCEAL MODE	ON	ON
B24: ECC MODE	AL OFF	AL OFF

Confirm that the Error rate in specification, on DVCPRO playback, REC (confi) and DV playback mode.


ERROR RATE
CH CONDITION
AUDIO CH1
AUDIO CH2
VIDEO CH1
VIDEO CH2
DVCPRO PB
DV PB
dB
0
-4
-8
-12
-16
-20
-25
-30
-40
-∞
C
B
A
RED
AMBER
GREEN

4.5.4. REC AMP Board

4.5.4.1. REC Current, Frequency Characteristic Adjustment

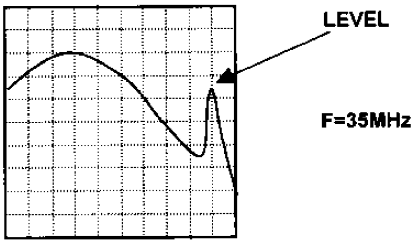
BOARD	RF AMP (H4)
SPEC.	———
TEST	TP17,TG7 (GND), TP2 (TRIG)
ADJUST	C01:REC CURR L, C03:REC CUR R C02:REC FREQ L, C04:REC FREQ R (EVR on RF ADJUST menu) VC600,VC601
INPUT	100% Colour bar
MODE	PLAY, REC/PLAY
TAPE	NTSC: VFM3580KM, PAL: VFM3680KM Blank Tape
M.EQ	Spectrum Analyzer/Monitor TV (Connect to VIDEO 3 OUT)

1. Connect the trigger of spectrum Analyzer at TP2 and connect the Spectrum Analyzer in at TP17 with 50ohm coaxial cable (Use GND at TG7).
2. Set the Error Rate display mode.
3. Open the RF ADJUST menu on Service menu and set as follows.

C20 ERROR MODE	FAST
C19 PB MODE	RP H
C18 VITERBI MODE	ON
C17 CONCEAL MODE	OFF
C16 ECC MODE	AL OFF

4. Playback the Alignment tape and Store the waveform on the spectrum Analyzer in TRACE-A.

5. Eject the Alignment tape and insert a Blank tape and record a colour bar 100% signal.



6. Set the TRACE-B mode on Spectrum Analyzer and Adjust VC600 and VC601 so that the peak level of 35MHz portion is minimum.

7. Adjust “C01:REC CUR L” and “C03:REC CUR R” so that the level of 5MHz portion is become -4dB±0.5dB per the waveform of TRACE-A.

8. Adjust “C02:REC FREQ L” and “C04:REC FREQ R” so that the level at 20MHz portion is become maximum.

POINT:

Set the confidence playback level is lower less than level of TRACE-A and increase the gain gradually by Search Dial so that the level is maximum.

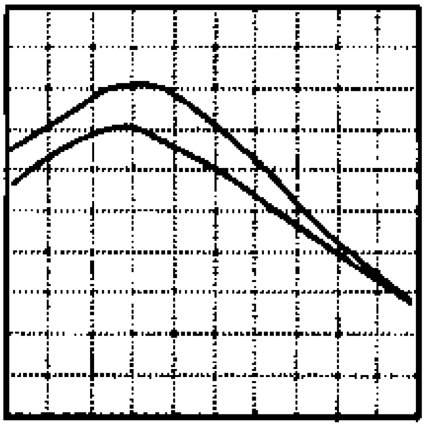
Please set the adjustment value in the first place the level is become maximum.

9. Confirm that the error rate is less than -12dB digit on the level meter. (Refer to item 5-3-22)

10. If the level of TRACE-B is not same as TRACE-A, confirm that the level of TRACE-B is within 0 to -2dB against TRASE-A (spec: 0 to -2dB).

11. Record for one minute keeping the above condition. Then

playback the just recorded potion and confirm the error rate is same or better than DVCPRO playback (Refer to item 5-3-22 : equivalent level of DVCPRO Alignment tape playback).



*** ITEM PARAMETER**

REF. LEVEL	**-25dB**
ATT	**10dB**
DIV	**5dB/DIV**
START FREQUENCY	**0KHz**
STOP FREQUENCY	**40MHz**
RES VW	**1MHz**
VBW	**3KHz**
SWEEP	**300msec**
TRIGGER	**EXT (HEAD SW)**

4.5.4.2. Rotary Erase Current Adjustment

BOARD	**RF AMP (H4)**
SPEC.	**1.0 ± 0.12V**
TEST	**TP11, TP12**
ADJUST	**VR13, VR14**
INPUT	**100% Colour Bar**
MODE	**REC/PLAY**
TAPE	**Blank Tape**
M.EQ	**Oscilloscope**

1. **Insert a REC/PLAY tape auto record a 100% colour bar signal.**
2. **Connect a scope to TP11 with 10:1 probe and adjust VR 13 (RE A) so that the DC level is in the specification (1.0V ± 0.12V).**
3. **Then connect the scope to TP12 and adjust VR14 (RE B) so that**

the DC level is in the specification (1.0V ± 0.12V).

4.6. REC PB

4.6.1. PLL Lock DC Level Adjustment

P.C.B.	REC PB (F5)
SPEC.	0.0V ± 0.2V
TEST	TP170
ADJ.	VC170
INPUT	———
MODE	EE
TAPE	———
M.EQ	Oscilloscope, Monitor TV

1. Adjust VC170 so that the DC level is in specification.

Note:
Confirm that the colour bar picture has no noise by watching the monitor TV.

4.6.2. Audio VCO Center Freq. Adjustment

P.C.B.	REC PB (F5)
SPEC.	48kHz Mode: 48.00kHz ± 0.1kHz 44kHz Mode: 44.10kHz ± 0.1kHz 32kHz Mode: 32.00kHz ± 0.1kHz
TEST	TP460
ADJ.	VR460 (48kHz), VR461 (44kHz), VR462 (32kHz)
INPUT	———
MODE	EE
TAPE	———
M.EQ	Oscilloscope, Frequency Counter, Monitor TV

1. Open the “E00:AUDIO ADJUST” menu on the Service Menu.
2. Select the item “E06:A VCO ADJ” and it setting follow the adjustment frequency as indicated as below procedure..

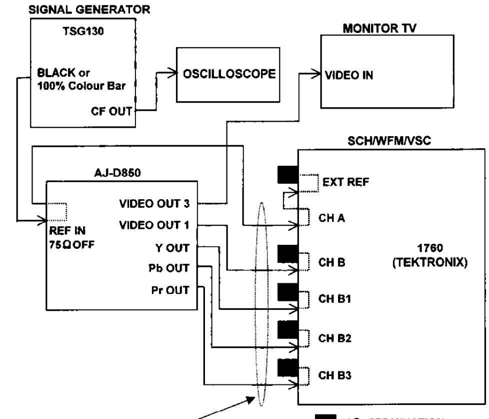
E06	: A VCO ADJ	48kHz
E06	: A VCO ADJ	44kHz
E06	: A VCO ADJ	32kHz

3. Set the item “E06:A VCO ADJ” to 48kHz and adjust VR460 so that the frequency is 48.00kHz ± 0.1kHz.

4. Set the item “E06:A VCO ADJ” to 44kHz and adjust VR461 so that the frequency is 44.10kHz ± 0.1kHz.
5. Set the item “E06:A VCO ADJ” to 32kHz and adjust VR462 so that the frequency is 32.00kHz ± 0.1kHz.
6. Finally, close the Service Menu.

4.7. Video Out P. C. Board (F4) [FOR NTSC ONLY]

Please warm up the VTR about 10 minute before adjustment.
CONNECTION


SIGNAL GENERATOR
TSG130
BLACK or
100% Colour Bar
CF OUT
OSCILLOSCOPE
MONITOR TV
VIDEO IN
SCH/WFM/VSC
AJ-D850
VIDEO OUT 3
VIDEO OUT 1
REF IN
75Ω OFF
Y OUT
Pb OUT
Pr OUT
EXT REF
CH A
CH B
1760
(TEKTRONIX)
CH B1
CH B2
CH B3
75Ω TERMINATION

*These 5 cables length should be the same

4.7.1. REF PLL Center Adjustment

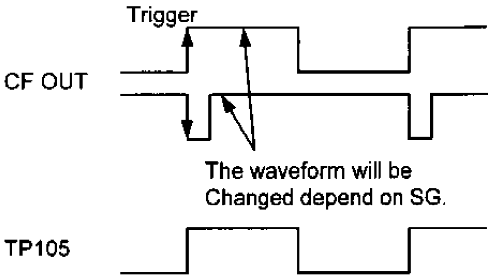
P.C.B.	V_OUT (F4)
SPEC.	0V± 0.1VDC
TEST	TP70 (D-1)
ADJ.	VC70 (D-1)
INPUT	EXT REF IN: Composite 75% Color Bar
MODE	EE
TAPE	———
M.EQ	Oscilloscope

1. Adjust VC70 so that the voltage is 0V± 0.1VDC.

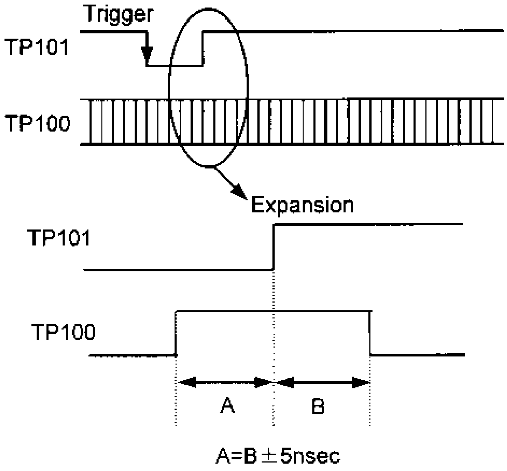
4.7.2. REF CF Detection Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**See Figure, A = B±5%**
TEST	**TP105 (E-4), CF Out of Signal SG** **TP100 (E-1), TP101 (E-1)**
ADJ.	**VR100 (C-1)**
INPUT	**EXT REF IN: Composite 75% Color Bar**
MODE	**EE**
TAPE	———
M.EQ	**Oscilloscope**

1. **Connect the oscilloscope CH1 to the CF output of composite signal generator and CH2 to TP105.**
2. **Adjust VR100 so that the phase is synchronized between CF pulses and TP105 as shown in figure.**


Trigger
CF OUT
The waveform will be Changed depend on SG.
TP105

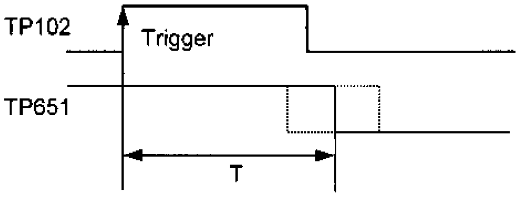
3. **Connect the oscilloscope CH1 to TP101 and CH2 to TP100.**
4. **Expand (delay) the rising edge of TP100.**
5. **Slowly and slightly rotate VR100 so that the rising edge of TP101 is positioned at the center of cross point between A and B of waveform at TP100.**


Trigger
TP101
TP100
Expansion
TP101
TP100
A
B
A=B±5nsec

4.7.3. Ref. H Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 5.3±0.1us
TEST	TP102 (E-1), TP651 (F-2)
ADJ.	VR101 (C-1)
INPUT	EXT REF IN: Composite 75% Color Bar
MODE	EE
TAPE	———
M.EQ	Oscilloscope

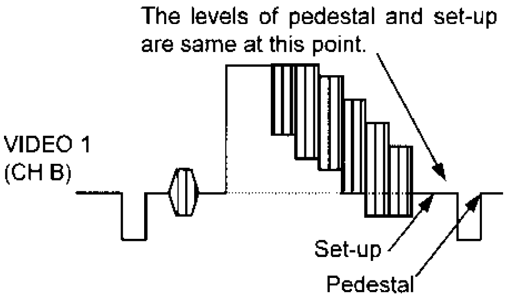
1. Connect the oscilloscope CH1 to TP102 and CH2 to TP651.
2. Adjust VR101 so that the timing of the pulses at TP651 and TP102 is as shown in below.



4.7.4. Composite Set-up Adjustment

P.C.B.	V_OUT (F4)
SPEC.	Set-up Level = Pedestal Level±1RE
TEST	VIDEO OUT 1
ADJ.	VR902 (G-1)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

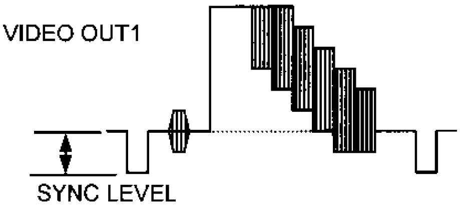
1. Open the VIDEO ADJUST menu on Service Menu and set item “D08: V SETUP” to ON.
2. Set the item “613:V IN SETUP” and “614:V OUT SETUP” to “THRU” on SET UP menu.
3. Adjust VR902 so that the set-up level is the same level as the pedestal level.


The levels of pedestal and set-up are same at this point.
VIDEO 1
(CH B)
Set-up
Pedestal

4.7.5. Sync Level Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**40IRE±1%**
TEST	**VIDEO OUT 1**
ADJ.	**VR950 (F-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Waveform Monitor**

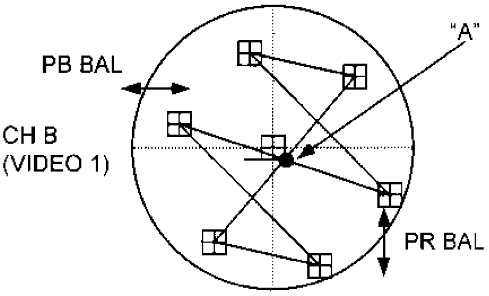
1. Adjust VR950 so that the Sync Level is 40IRE±1%.


VIDEO OUT1
SYNC LEVEL

4.7.6. Carrier Balance Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**Cross point "A" at the center of scope.**
TEST	**REF IN (CH A), VIDEO OUT 1 (CH B)**
ADJ.	**VR806 (H-1), VR807 (H-1)**
INPUT	**EXT REF IN**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Vector Scope**

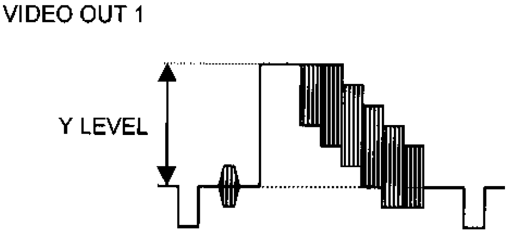
1. Adjust VR806 (PB BAL) and VR807 (PR BAL) so that the cross point "A" is positioned at the center of the vector scope.



4.7.7. Composite Y Level Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**100IRE±1%**
TEST	**VIDEO OUT 1**
ADJ.	**VR900 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Waveform Monitor**

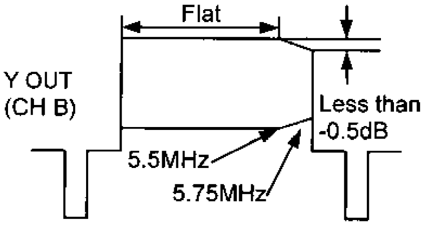
1. Adjust VR900 so that the Y level is 100IRE±1%.



4.7.8. Composite Y Frequency Response Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**5.5MHz = Less than -0.5dB**
TEST	**Y OUT**
ADJ.	**VR901 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (H-Sweep portion)**
M.EQ	**Waveform Monitor**

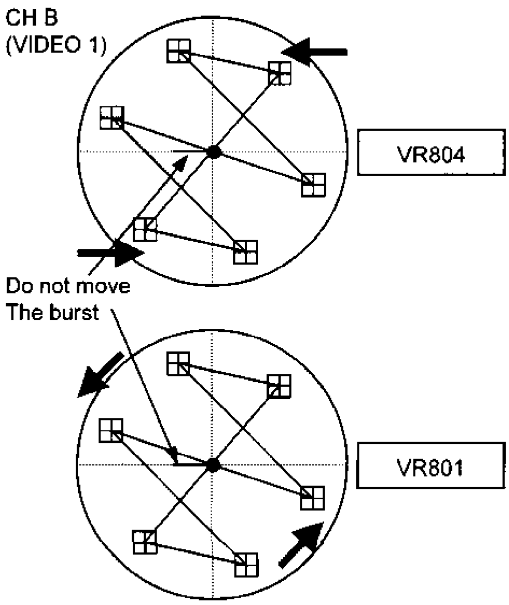
1. Adjust VR901 so that the frequency response becomes flat.
a) The level of 5.5MHz portion is less than -0.5dB.
b) The middle frequency is flat.

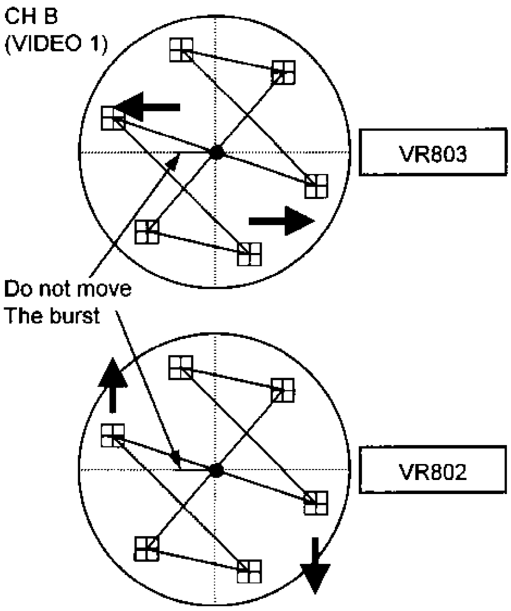


4.7.9. Vector Adjustment

P.C.B.	V_OUT (F4)
SPEC.	All vectors are in the Inner Boxes
TEST	VIDEO OUT 1
ADJ.	VR801 (H-1), VR802 (I-1) VR803 (H-1), VR804 (I-1)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Vector Scope

1. **Set the burst position on the Vector Scope at correct position.**
2. **Adjust the following VR's so that the color bar's each vector points are in the square mark on the vector scope.**
   VR804 : Quad Phase
   VR801 : Hue Phase
   VR803 : Encode PB Level
   VR802 : Encode PR Level

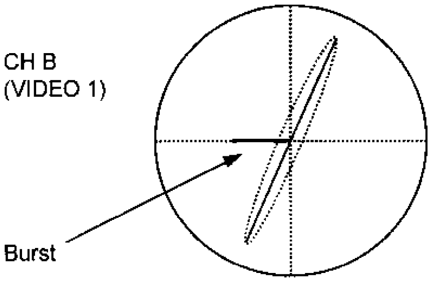

CH B
(VIDEO 1)
VR804
Do not move
The burst
VR801


CH B
(VIDEO 1)
VR803
Do not move
The burst
VR802

4.7.10. Composite Pb/Pr Timing Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0±10nsec**
TEST	**VIDEO OUT 1**
ADJ.	**VR703 (H-3)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (Bowtie portion)**
M.EQ	**Vector Scope**

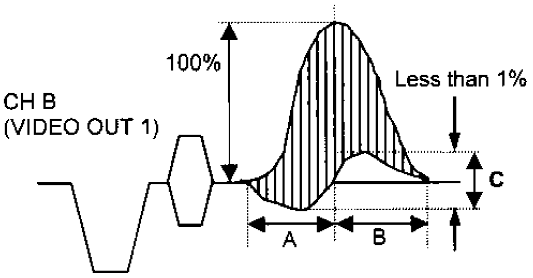
1. Adjust VR703 so that the signal on the vector scope becomes 1 straight lines (X) as shown in figure.



4.7.11. Composite Y/C Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0±10nsec (C = less than 1%)
TEST	VIDEO OUT 1
ADJ.	VR903 (G-1)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (Pulse Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR903 so that the portion A and B are become symmetric left and right and level of portion C less than 1% against level of waveform 100% as shown in figure.
2. When performing this adjustment, the level of waveform may be changed. Therefore, level of waveform is adjusted by Chroma VR on the front panel during this adjustment.
3. After finish this adjustment set the Chroma VR to preset position.
4. After completion of this adjustment, “6-12. Sub-Carrier Phase Adjustment” should be performed.

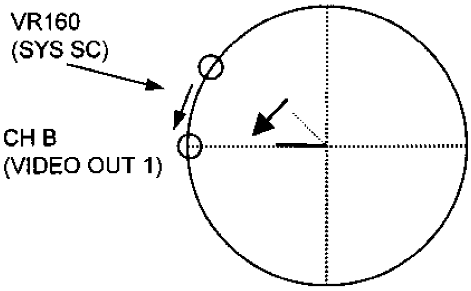


Symmetric the notching portion with 100% and measure with X10

4.7.12. Sub-Carrier Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0±1degree
TEST	VIDEO OUT 1, REF IN
ADJ.	VR160 (C-1)
INPUT	REF IN: Composite 75% Color Bar
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	SCH Meter

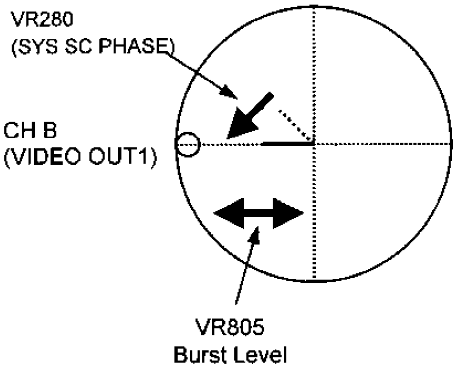
1. Adjust VR160 so that the SCH of VIDEO OUT is same as EXT-REF-IN, then SCH phase should be become 0±1 degree.

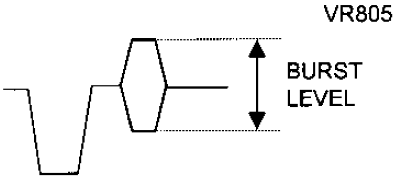


4.7.13. Burst Adjustment

P.C.B.	V_OUT (F4)
SPEC.	PHASE: 0±1degree LEVEL: 40±0.4IRE
TEST	VIDEO OUT 1
ADJ.	VR280 (C-1), VR805 (I-1)
INPUT	REF IN: Composite 75% Color Bar
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	SCH Meter

1. Adjust VR280 while changing the channels A and B of the SCH meter alternately so that the SCH is 0 degree.
2. Adjust VR805 while changing the channels A and B of the SCH meter alternately so that the burst level and burst phase are become same between VIDEO 1 OUT (CHB) and REF (CHA),then burst level is should be become 40±0.4IRE.


VR280
(SYS SC PHASE)
CH B
(VIDEO OUT1)
VR805
Burst Level

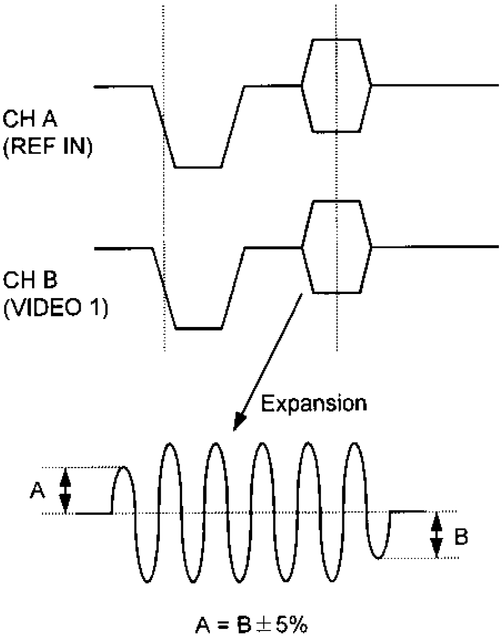

VR805
BURST
LEVEL

Level adjustment is enable by WFM

4.7.14. Burst Position Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**A = B±5%**
TEST	**VIDEO OUT 1, REF IN**
ADJ.	**VR201 (A-1)**
INPUT	**REF IN: Composite 75% Color Bar**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Waveform Monitor**

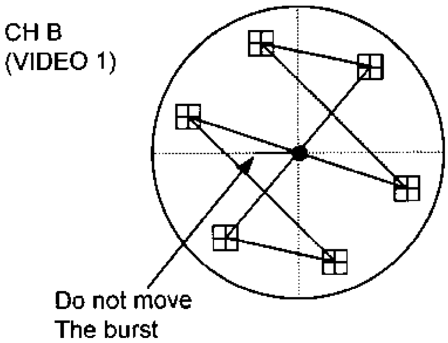
1. **Adjust VR201 while changing the channels A and B of the vector scope alternately so that the center of the burst of the reference and VIDEO OUT 1 are phase synchronized and level difference between A and B portion in specification.**



4.7.15. Confirmation of Vector

P.C.B.	**V_OUT (F4)**
SPEC.	**All vectors are in the Inner Boxes**
TEST	**VIDEO OUT 1**
ADJ.	**VR801 (H-1), VR803 (H-1)** **VR802 (I-1), VR800 (H-1)**
INPUT	———
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Vector Scope**

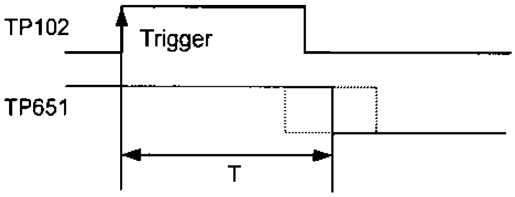
1. **Set the burst position on the Vector Scope at correct position.**
2. **Confirm that the color bar's each vector points are in the square mark on the vector scope.**
3. **If out of specification, adjust the following VR's so that the color bar's each vector points are in the square mark on the vector scope. (Refer to item 7-9. Vector Adjustment).**
   VR804 : Quad Phase
   VR801 : Hue Phase
   VR803 : Encode PB Level
   VR802 : Encode PR Level



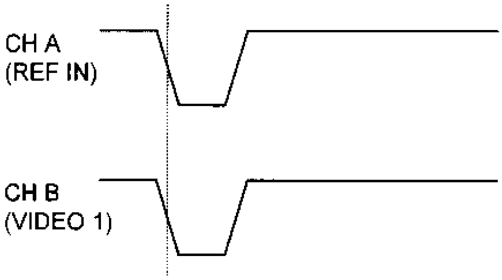
4.7.16. Component Ref. H & Sub-Carrier Phase Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**T = 5.3±0.1usec** **0±10nsec**
TEST	**TP102, TP651** **VIDEO OUT 1, EXT REF IN**
ADJ.	**VR102 (C-1)**
INPUT	**REF IN : 75% Color Bar** **(without burst: Component Y)**
MODE	**EE**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Oscilloscope, Waveform Monitor**

1. **Connect the oscilloscope CH1 to TP102 and CH2 to TP651.**
2. **Adjust VR102 so that the timing of the phase at TP102 and TP651 are as shown in below.**



3. **Playback the color bar portion of Alignment tape.**
4. **Adjust VR102 so that the phase synchronized within 0±10nsec between REF IN (CHA) and Video 1 Out (CHB) as shown in figure.**

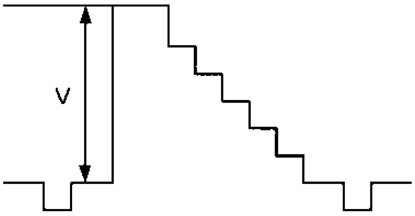


4.7.17. Component Y Level Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**V = 700mV±7mV**
TEST	**COMPONENT Y OUT**
ADJ.	**VR700 (I-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Waveform Monitor**

1. Set the SW950 to MII side on V OUT P.C.Board..

2. Adjust VR700 so that the V level is 700mV±7mV.



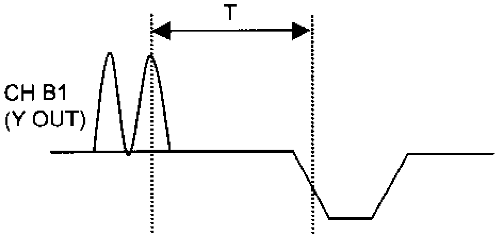
4.7.18. Video Phase Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**T = 1.26±0.02usec**
TEST	**Y OUT**
ADJ.	**VR260 (A-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (Area Marker portion)**
M.EQ	**Waveform Monitor**

1. Open the Video Adjust menu on Service menu and set item “D01: VIDEO BLANK” to OFF position.

2. Adjust VR260 so that the timing T is within specification.

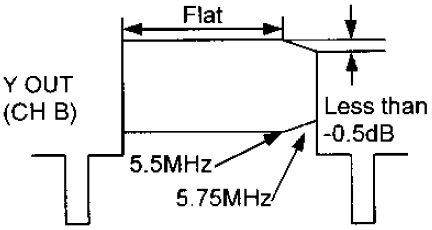
3. After finish this adjustment, set to ON position of item “D01: VIDEO BLANK”.



4.7.19. Component Y Frequency Response Adjustment

P.C.B.	V_OUT (F4)
SPEC.	5.5MHz = Less than -0.5dB
TEST	COMPONENT Y OUT
ADJ.	VR701 (I-2)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (H Sweep portion)
M.EQ	Waveform Monitor

1. Adjust VR701 so that the frequency response becomes flat.

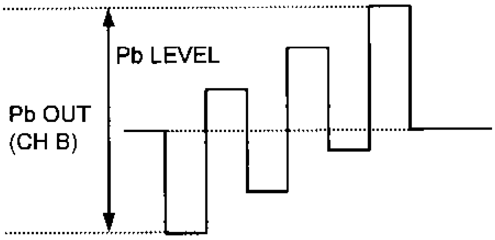


4.7.20. Component Pb Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	525mV±5mV
TEST	COMPONENT PB OUT
ADJ.	VR706 (J-1)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

1. Set the SW950 to MII side on V OUT P.C.Board..

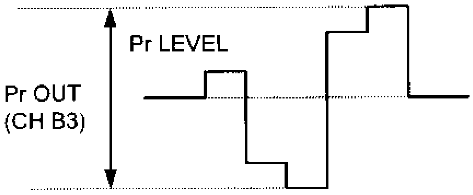
2. Adjust VR706 so that the Pb level of component out is within specification.



4.7.21. Component Pr Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	525mV±5mV
TEST	COMPONENT Pr OUT
ADJ.	VR704 (H-2)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

1. Set the SW950 to MII side on V OUT P.C.Board..
2. Adjust VR704 so that the Pr level of component out is within specification.



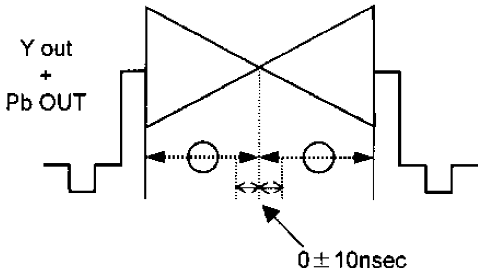
4.7.22. Component Y/Pb Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0±10nsec
TEST	COMPONENT Y OUT, PB OUT
ADJ.	VR705 (J-2)
INPUT	———
MODE	PLAY
TAPE	VFM3580KM (Bowtie portion)
M.EQ	Waveform Monitor

1. **Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).**
2. **Adjust VR705 so that the cross point of the envelope is at the center.**

Note:

Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have "ADD" and "INVERT" switch, please use those switch for make below waveform.



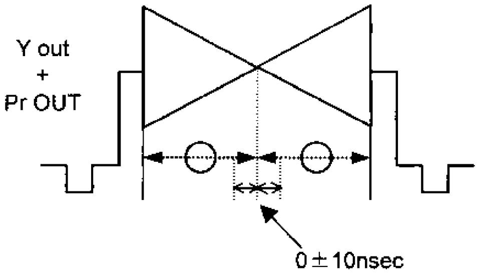
4.7.23. Component Y/Pr Timing Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0±10nsec**
TEST	**COMPONENT Y OUT, Pr OUT**
ADJ.	**VR702 (H-2)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (Bowtie portion)**
M.EQ	**Waveform Monitor**

1. **Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).**
2. **Adjust VR702 so that the cross point of the envelope is at the center.**

Note:

Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have "ADD" and "INVERT" switch, please use those switch for make below waveform.



4.7.24. Composite Set up Adjustment (Set up ADD mode)

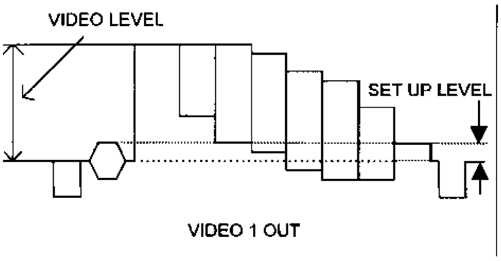
P.C.B.	**V_OUT (F4)**
SPEC.	**Set up level = 7.5±0.5IRE**
TEST	**VIDEO 1 OUT**
ADJ.	**VR905 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Waveform Monitor**

1. Set the item “614: VOUT SET UP” to “ADD” on Set-up menu.

2. Adjust VR905 so that the Set-up level is 7.5±0.5IRE.

NOTE:

Signal have carrier leak and noise, therefore set Y-filter mode on WFM monitor.



4.7.25. Composite Video Level Adj. (Set up ADD mode)

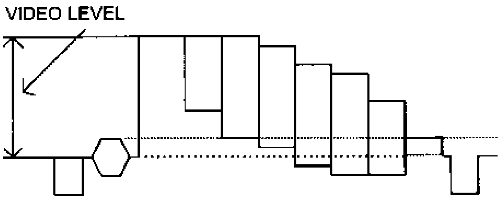
P.C.B.	**V_OUT (F4)**
SPEC.	**Video level = 100±1 IRE**
TEST	**VIDEO 1 OUT**
ADJ.	**VR904 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Waveform Monitor**

1. Set the item “614: VOUT SET UP” to “ADD” on Set-up menu.

2. Adjust VR904 so that the Video level is 100±1 IRE.

NOTE:

Signal have carrier leak and noise, therefore set Y-filter mode on WFM monitor.



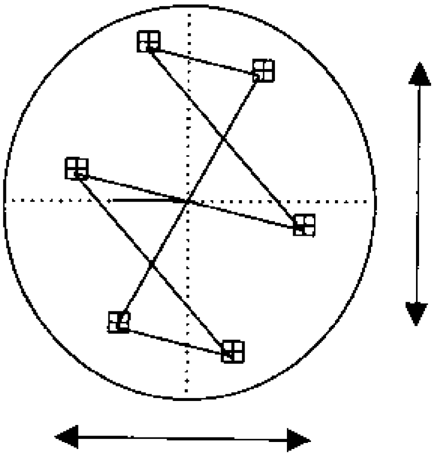
VIDEO 1 OUT

4.7.26. Vector Adjustment (Set up ADD mode)

P.C.B.	**V_OUT (F4)**
SPEC.	**All vectors are in the Inner Boxes**
TEST	**VIDEO 1 OUT**
ADJ.	**VR809 (I-1),VR810 (I-1)**
INPUT	———
MODE	**PLAY**
TAPE	**VFM3580KM (75% Color Bar portion)**
M.EQ	**Vector Scope**

1. Set the item “614: VOUT SET UP” to “ADD” on Set-up menu.

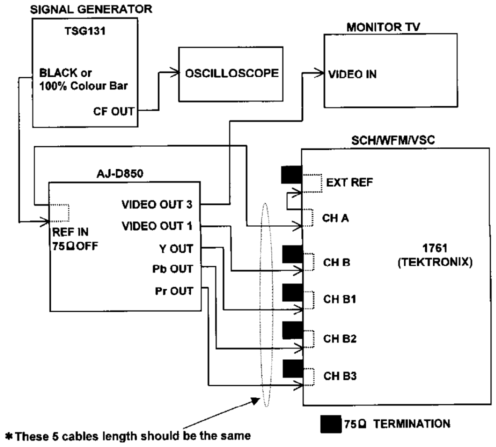
2. Adjust VR809 (PR) and VR810 (PB) so that the each vector points are in the square mark on the vector scope.



4.8. Video Out P. C. Board (F4) [FOR PAL ONLY]

Please warm up the VTR about 10 minute before adjustment.

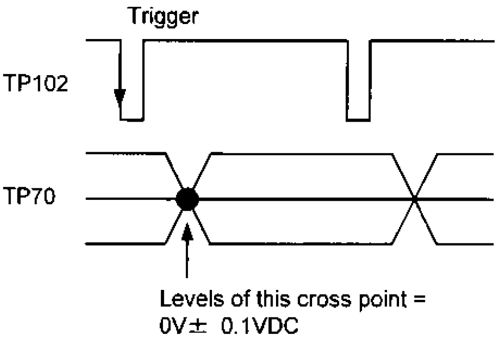
CONNECTION


SIGNAL GENERATOR
TSG131
BLACK or
100% Colour Bar
CF OUT
OSCILLOSCOPE
MONITOR TV
VIDEO IN
SCH/WFM/VSC
AJ-D850
VIDEO OUT 3
VIDEO OUT 1
REF IN
75Ω OFF
Y OUT
Pb OUT
Pr OUT
EXT REF
CH A
CH B
CH B1
CH B2
CH B3
1761
(TEKTRONIX)
75Ω TERMINATION
*These 5 cables length should be the same

4.8.1. REF PLL Center Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0V± 0.1VDC**
TEST	**TP70 (D-1), TP102**
ADJ.	**VC70 (D-1)**
INPUT	**EXT REF IN: Composite 100% Colour Bar**
MODE	**EE**
TAPE	———
M.EQ	**Oscilloscope**

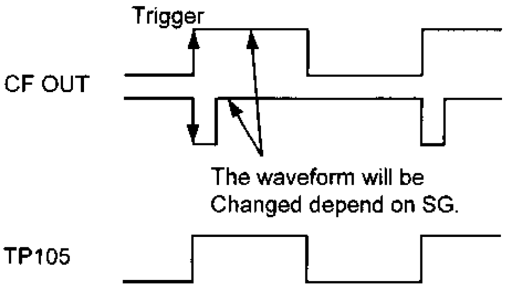
1. Adjust VC70 so that the voltage is 0V± 0.1VDC.


Trigger
TP102
TP70
Levels of this cross point =
0V± 0.1VDC

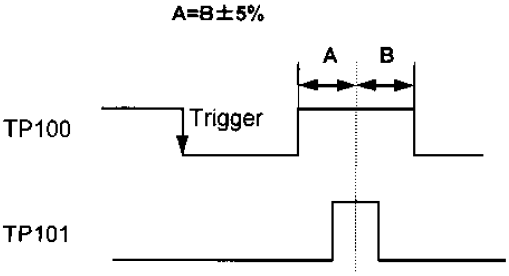
4.8.2. REF CF Detection Adjustment

P.C.B.	V_OUT (F4)
SPEC.	See Figure, A = B±5%
TEST	TP105 (E-4), CF Out of Signal SG TP100 (E-1), TP101 (E-1)
ADJ.	VC100 (C-1)
INPUT	EXT REF IN: Composite 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Oscilloscope

1. Connect the oscilloscope CH1 to the CF output of composite signal generator and CH2 to TP105.
2. Adjust VR100 so that the phase is synchronized between CF pulses and TP105 as shown in figure.


Trigger
CF OUT
The waveform will be
Changed depend on SG.
TP105

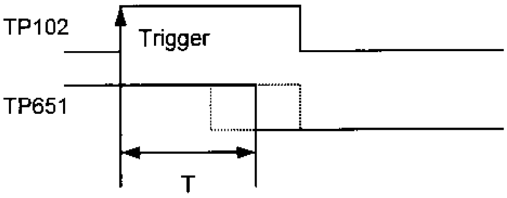
3. Connect the oscilloscope CH1 to TP101 and CH2 to TP100.
4. Expand (delay) the rising edge of TP100.
5. Slowly and slightly rotate VR100 so that the high period of TP100 is positioned at the center of the stable waveform at TP101.


A=B±5%
A
B
TP100
Trigger
TP101

4.8.3. Ref. H Phase Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**T = 3.3±0.1us**
TEST	**TP102 (E-1), TP651 (F-2)**
ADJ.	**VR101 (C-1)**
INPUT	**EXT REF IN: Composite 100% Colour Bar**
MODE	**EE**
TAPE	———
M.EQ	**Oscilloscope**

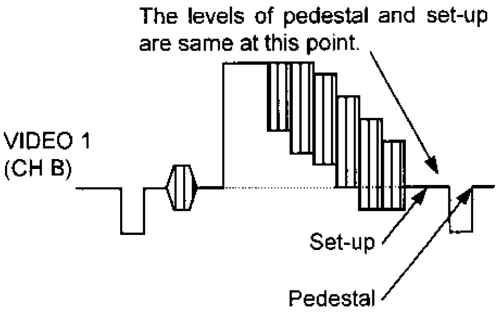
1. **Connect the oscilloscope CH1 to TP102 and CH2 to TP651.**
2. **Adjust VR101 so that the timing of the pulses at TP651 and TP102 is as shown in below.**


TP102
Trigger
TP651
T

4.8.4. Composite Set-up Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**Set-up Level = Pedestal Level±5mV**
TEST	**VIDEO 1**
ADJ.	**VR902 (G-1)**
INPUT	———
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Waveform Monitor**

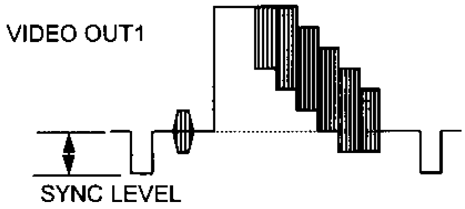
1. **Adjust VR902 so that the set-up level is the same level as the pedestal level.**


The levels of pedestal and set-up are same at this point.
VIDEO 1
(CH B)
Set-up
Pedestal

4.8.5. Sync Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	300mV±3mV
TEST	VIDEO OUT 1
ADJ.	VR950 (F-1)
INPUT	———
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

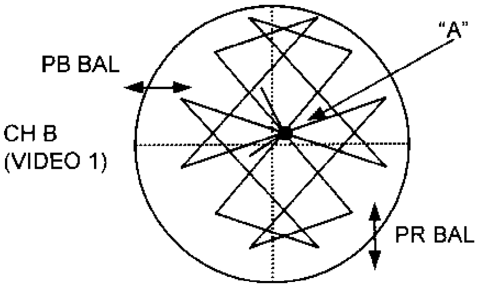
1. Adjust VR950 so that the Sync Level is 300mV±3mV.



4.8.6. Carrier Balance Adjustment

P.C.B.	V_OUT (F4)
SPEC.	Cross point “A” at the center of scope.
TEST	REF IN (CH A), VIDEO OUT 1 (CH B)
ADJ.	VR806 (H-1), VR807 (H-1)
INPUT	EXT REF IN
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Vector Scope

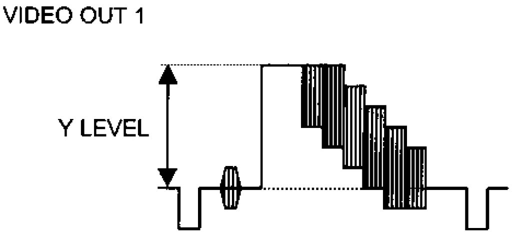
1. Set the vector scope in the without set-up mode.
2. Adjust VR806 (PB BAL) and VR807 (PR BAL) so that the cross point “A” is positioned at the center of the vector scope.



4.8.7. Composite Y Level Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**700mV±7mV**
TEST	**VIDEO 1**
ADJ.	**VR900 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Waveform Monitor**

1. Adjust VR900 so that the Y level is 700mV±7mV.



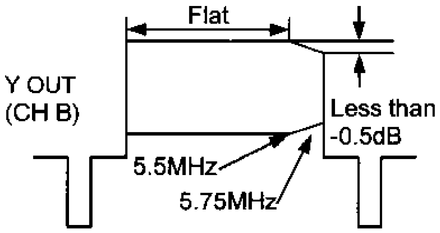
4.8.8. Composite Y Frequency Response Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**5.5MHz = Less than -0.5dB**
TEST	**Y OUT**
ADJ.	**VR901 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (H-Sweep portion)**
M.EQ	**Waveform Monitor**

1. Adjust VR901 so that the frequency response becomes flat.

a) The level of 5.5MHz portion is less than -0.5dB.

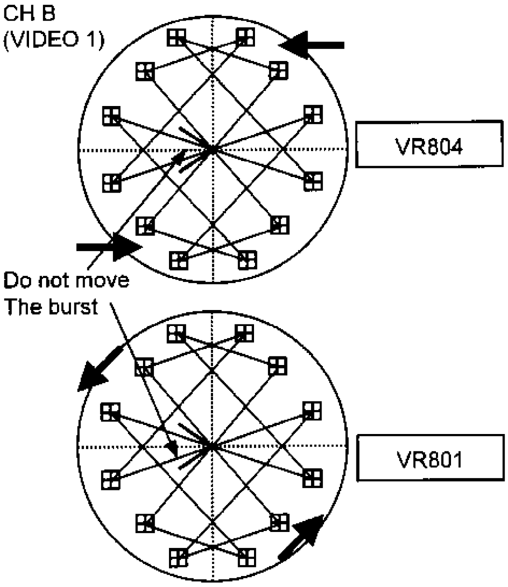
b) The middle frequency is flat.

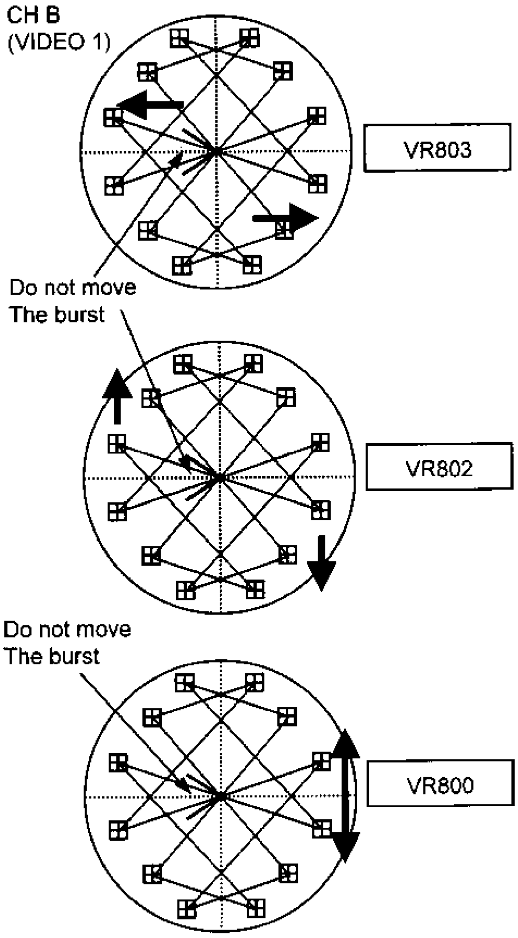


4.8.9. Vector Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**All vectors are in the Inner Boxes**
TEST	**VIDEO OUT 1**
ADJ.	**VR804 (I-1), VR801 (H-1), VR803 (H-1)** **VR802 (I-1), VR800 (H-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Vector Scope**

1. **Set the burst position on the Vector Scope at correct position.**
2. **Adjust the following VR's so that the colour bar's each vector points are in the square mark on the vector scope.**
   VR804 : Quad Phase
   VR801 : Hue Phase
   VR803 : Encode PB Level
   VR802 : Encode PR Level
   VR800 : PAL Phase

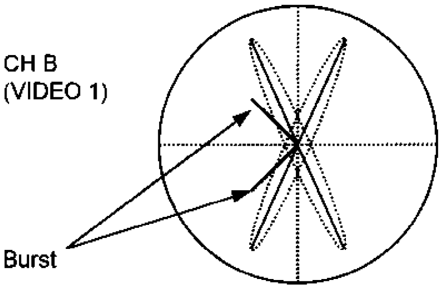



CH B
(VIDEO 1)
VR803
Do not move
The burst
VR802
Do not move
The burst
VR800

4.8.10. Composite Pb/Pr Timing Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0±10nsec**
TEST	**VIDEO OUT 1**
ADJ.	**VR703 (H-3)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (Bowtie portion)**
M.EQ	**Vector Scope**

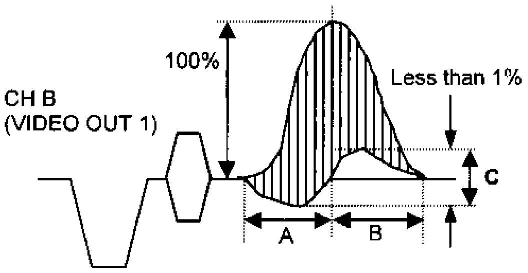
1. **Adjust VR703 so that the signal on the vector scope becomes 2 straight lines (X) as shown in figure.**



4.8.11. Composite Y/C Timing Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0±10nsec (C = less than 1%)**
TEST	**VIDEO OUT 1**
ADJ.	**VR903 (G-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (Pulse Bar portion)**
M.EQ	**Waveform Monitor**

1. **Adjust VR903 so that the portion A and B are become symmetric left and right and level of portion C less than 1% against level of waveform 100% as shown in figure.**
2. **When performing this adjustment, the level of waveform may be changed. Therefore, level of waveform is adjusted by Chroma VR on the front panel during this adjustment.**
3. **After finish this adjustment set the Chroma VR to preset position.**
4. **After completion of this adjustment, “6-12. Sub-Carrier Phase Adjustment” should be performed.**

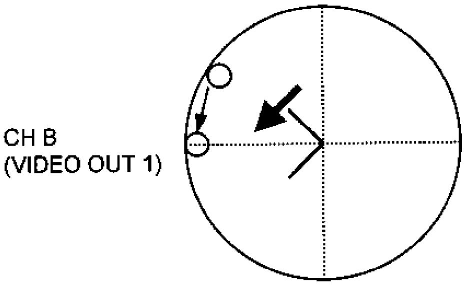


Symmetric the notching portion with 100%
and measure with X10

4.8.12. Sub-Carrier Phase Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0±1degree**
TEST	**VIDEO OUT 1, REF IN**
ADJ.	**VR160 (C-1)**
INPUT	**REF IN: Composite 100% Colour Bar**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**SCH Meter**

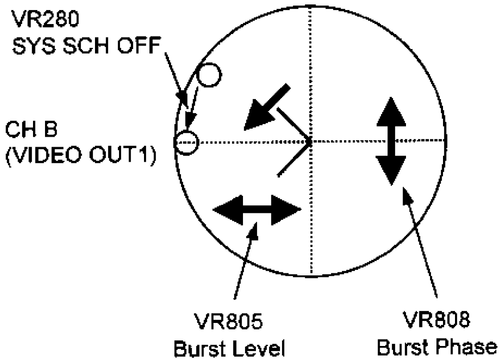
1. **Adjust VR160 so that the SCH of VIDEO OUT is same as EXT-REF-IN.**



4.8.13. Burst Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**0±1degree**
TEST	**VIDEO OUT 1**
ADJ.	**VR280 (C-1), VR805 (I-1), VR808 (I-1)**
INPUT	**REF IN: Composite 100% Colour Ba**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**SCH Meter**

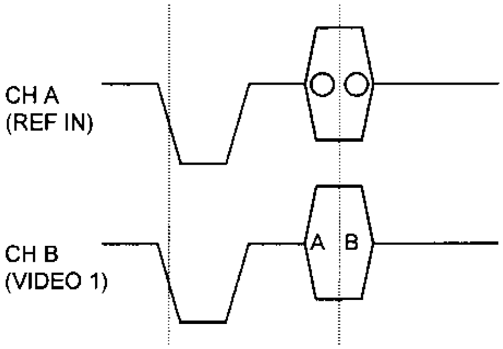
1. **Adjust VR280 while changing the channels A and B of the SCH meter alternately so that the SCH is 0 degree.**
2. **Adjust VR805 and VR808 while changing the channels A and B of the SCH meter alternately so that the burst level and burst phase are become same between VIDEO 1 OUT (CHB) and REF (CHA).**


VR280
SYS SCH OFF
CH B
(VIDEO OUT1)
VR805
Burst Level
VR808
Burst Phase

4.8.14. Burst Position Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**A = B±5%**
TEST	**VIDEO OUT 1, REF IN**
ADJ.	**VR201 (A-1)**
INPUT	**REF IN: Composite 100% Colour Bar**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Waveform Monitor**

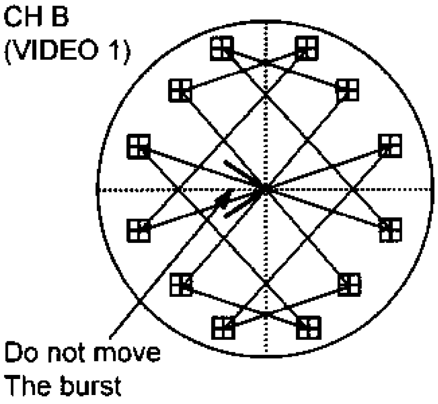
1. Adjust VR201 while changing the channels A and B of the vector scope alternately so that the center of the burst of the reference and VIDEO OUT 1 are phase syncronized.


CH A
(REF IN)
CH B
(VIDEO 1)
A
B

4.8.15. Confirmation of Vector

P.C.B.	**V_OUT (F4)**
SPEC.	**All vectors are in the Inner Boxes**
TEST	**VIDEO OUT 1**
ADJ.	**VR804 (I-1), VR801 (H-1), VR803 (H-1) VR802 (I-1), VR800 (H-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Vector Scope**

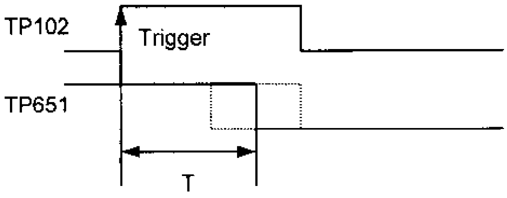
1. **Set the burst position on the Vector Scope at correct position.**
2. **Confirm that the colour bar's each vector points are in the square mark on the vector scope.**
3. **If out of specification, adjust the following VR's so that the colour bar's each vector points are in the square mark on the vector scope. (Refer to item 6-9. Vector Adjustment).**
   VR804 : Quad Phase
   VR801 : Hue Phase
   VR803 : Encode PB Level
   VR802 : Encode PR Level
   VR800 : PAL Phase



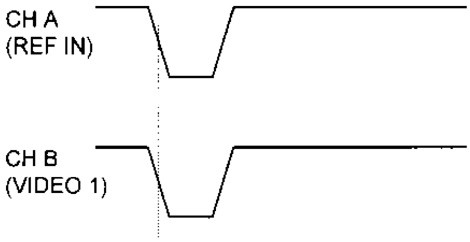
4.8.16. Component Ref. H & Sub-Carrier Phase Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**T = 3.3±0.1usec** **0±10nsec**
TEST	**TP102, TP651** **VIDEO OUT 1, EXT REF IN**
ADJ.	**VR102 (C-1)**
INPUT	**REF IN : 100% colour bar** **(without burst: Component Y)**
MODE	**EE**
TAPE	**———**
M.EQ	**Oscilloscope, Waveform Monitor**

1. **Connect the oscilloscope CH1 to TP102 and CH2 to TP651.**
2. **Adjust VR102 so that the timing of the phase at TP102 and TP651 are as shown in below.**



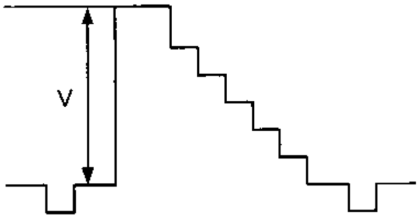
3. **Set the waveform monitor in the EXT-REF mode.**
4. **Adjust VR102 so that the phase synchronized between REF IN (CHA) and Video 1 Out (CHB) as shown in figure.**



4.8.17. Component Y Level Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**V = 700mV±7mV**
TEST	**COMPONENT Y OUT**
ADJ.	**VR700 (I-1)**
INPUT	———
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Waveform Monitor**

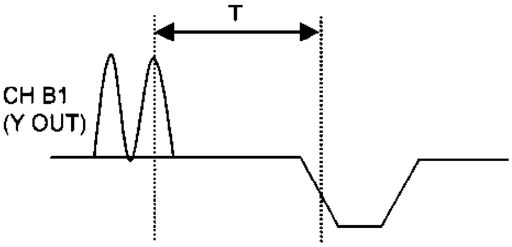
1. Adjust VR700 so that the V level is 700mV±7mV.



4.8.18. Video Phase Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**T = 0.96±0.02usec**
TEST	**Y OUT**
ADJ.	**VR260 (A-1)**
INPUT	———
MODE	**PLAY**
TAPE	**VFM3680KM (Area Marker portion)**
M.EQ	**Waveform Monitor**

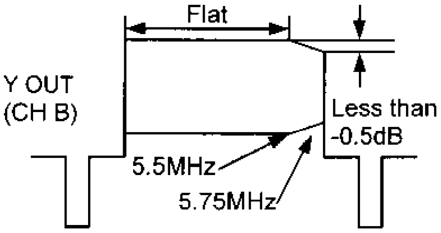
1. **Open the Video Adjust menu on Service menu and set item "D01: VIDEO BLANK" to OFF position.**
2. **Adjust VR260 so that the timing T is within specification.**
3. **After finish this adjustment, set to ON position of item "D01: VIDEO BLANK".**



4.8.19. Component Y Frequency Response Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**5.5MHz = Less than -0.5dB**
TEST	**COMPONENT PB OUT**
ADJ.	**VR701 (I-2)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (H Sweep portion)**
M.EQ	**Waveform Monitor**

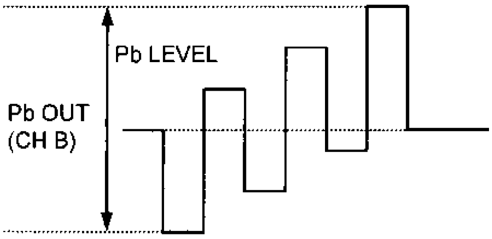
1. Adjust VR701 so that the frequency response becomes flat.



4.8.20. Component Pb Level Adjustment

P.C.B.	**V_OUT (F4)**
SPEC.	**700mV±7mV**
TEST	**COMPONENT PB OUT**
ADJ.	**VR706 (J-1)**
INPUT	**———**
MODE	**PLAY**
TAPE	**VFM3680KM (100% Colour Bar portion)**
M.EQ	**Waveform Monitor**

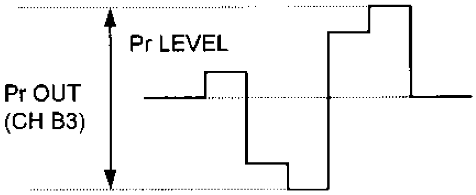
1. Adjust VR706 so that the Pb level of component out is within specification.



4.8.21. Component Pr Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	700mV±7mV
TEST	COMPONENT Pr OUT
ADJ.	VR704 (H-2)
INPUT	———
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR704 so that the Pr level of component out is within specification.



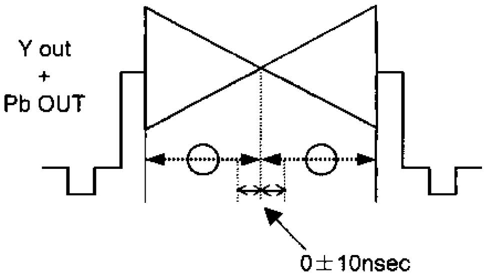
4.8.22. Component Y/Pb Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0±10nsec
TEST	COMPONENT Y OUT, PB OUT
ADJ.	VR705 (J-2)
INPUT	———
MODE	PLAY
TAPE	VFM3680KM (Bowtie portion)
M.EQ	Waveform Monitor

1. Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).
2. Adjust VR705 so that the cross point of the envelope is at the center.

Note:

Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have “ADD” and “INVERT” switch, please use those switch for make below waveform.



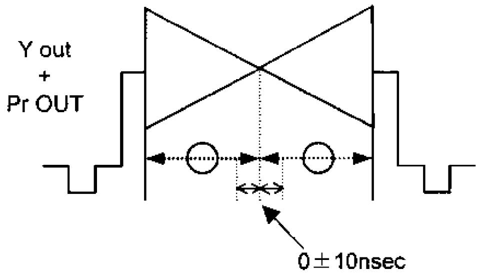
4.8.23. Component Y/Pr Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0±10nsec
TEST	COMPONENT Y OUT, Pr OUT
ADJ.	VR702 (H-2)
INPUT	———
MODE	PLAY
TAPE	VFM3680KM (Bowtie portion)
M.EQ	Waveform Monitor

1. **Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).**
2. **Adjust VR702 so that the cross point of the envelope is at the center.**

Note:

Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have "ADD" and "INVERT" switch, please use those switch for make below waveform.



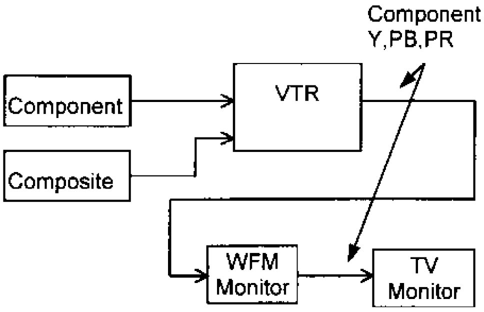
4.9. V IN P. C. Board [FOR NTSC ONLY]

4.9.1. Preparation for Video In Adjustment

1. **Connect the equipment as shown in the figure.**
2. **V IN P.C.Board adjustment should be performed after the V OUT P.C.Board adjustment.**
3. **Set the menu and SW as follows.**

SET UP MENU 613: V IN SETUP → THOU
614: V OUT SETUP → THOU
600: PB PR IN LV → MII

- **SW950 → MII (V OUT P.C.Board.)**

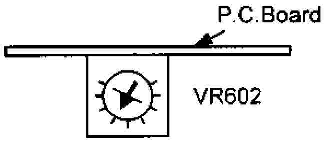

Component
Y,PB,PR
Component
Composite
VTR
WFM
Monitor
TV
Monitor

4.9.2. 13.5MHz VCO Adjustment

P.C.B.	V_IN (F6)
SPEC.	0V± 0.1V
TEST	TP601
ADJ.	VL601, VR602
INPUT	Component 100% Color Bar
MODE	EE
TAPE	———
M.EQ	Oscilloscope

1. Set VR602 below figure indicated position.

2. Adjust VL601 so that the DC Voltage is 0V± 0.1V.

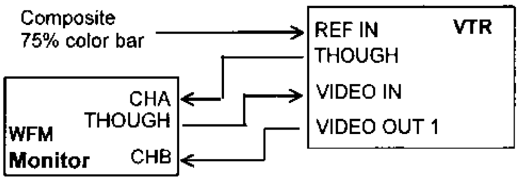

P.C.Board
VR602

TURN RIGHT 1 SCALE (30 degrees) from the center.

4.9.3. Component Y Timing Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**Phase synchronized between REF IN and VIDEO OUT 1.**
TEST	**REF IN, VIDEO OUT 1**
ADJ.	**VR601**
INPUT	**Composite 100% Color Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**WFM Monitor**

1. Connect the cables as indicated as below.

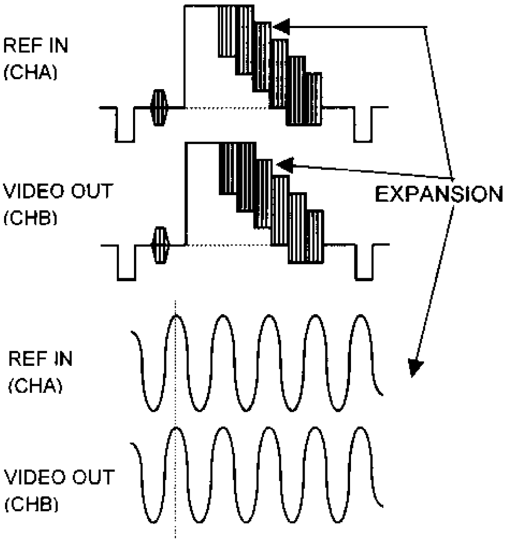

Composite
75% color bar
REF IN
VTR
THOUGH
VIDEO IN
VIDEO OUT 1
CHA
THOUGH
WFM
Monitor
CHB

2. Expand the GREEN portion of color bar signal.

3. Adjust VR601 while change the CHA and CHB of WFM monitor so that the phase synchronized between CHA (REF IN) and CHB (VIDEO OUT).

NOTE:

This adjustment should be performed after V OUT P.C.Board adjustment.

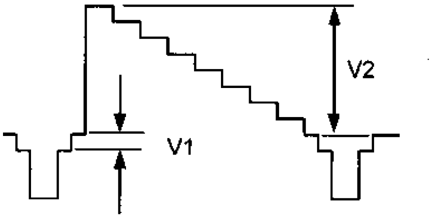

REF IN
(CHA)
VIDEO OUT
(CHB)
EXPANSION
REF IN
(CHA)
VIDEO OUT
(CHB)

4.9.4. Component Y Level Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**V1 = 0V±7mV, V2 = 700mV±7mV**
TEST	**Y OUT**
ADJ.	**VR702, VR701**
INPUT	**Component 100% Color Bar**
MODE	**EE**
TAPE	———
M.EQ	**Waveform Monitor**

1. Adjust VR702 so that the V1 is 0V±7mV.

2. Adjust VR701 so that the V2 is 700mV±7mV.

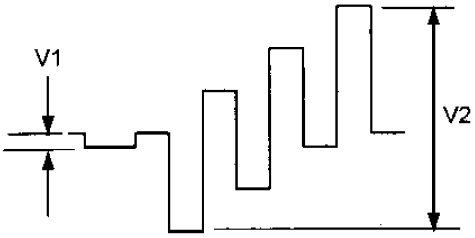


4.9.5. Component PB Level Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**V1 = 0V±7mV, V2 = 700mV±7mV**
TEST	**PB OUT**
ADJ.	**VR752, VR753**
INPUT	**Component 100% Color Bar**
MODE	**EE**
TAPE	———
M.EQ	**Waveform Monitor**

1. Adjust VR752 so that the V1 is 0±7mV.

2. Adjust VR753 so that the V2 is 700m±7mV.

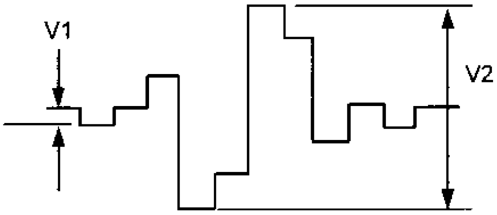


4.9.6. Component PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V±7mV, V2 = 700mV±7mV
TEST	PR OUT
ADJ.	VR802, VR803
INPUT	Component 100% Color Bar
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR802 so that the V1 is 0V±7mV.

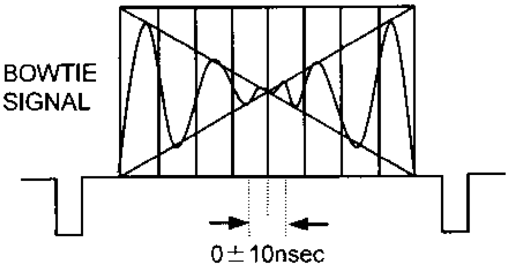
2. Adjust VR803 so that the V2 is 700mV±7mV.



4.9.7. Component Y/C Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	0±10nsec
TEST	Y, PB, PR OUT
ADJ.	VR751 (PB), VR801 (PR)
INPUT	Component IN : BOWTIE
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR751 so that the minimum level of the Y/PB timing signal is 0±10nsec against the center scale.
Adjust VR801 so that the minimum level of the Y/PB timing signal is 0±10nsec against the center scale.



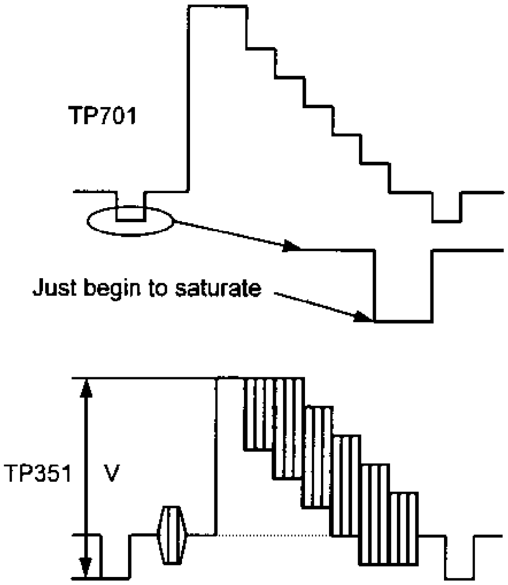
4.9.8. Composite Input Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 1.6V±0.02V
TEST	TP1 (SUB P.C.B.), TP351
ADJ.	VR351, VR301
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	———
M.EQ	Oscilloscope

1. **Observe TP1 and adjust VR351 at the point where the sync tip just begin to saturate.**
2. **Adjust VR301 so that the voltage at TP351 is 1.6V±0.02V.**

NOTE:

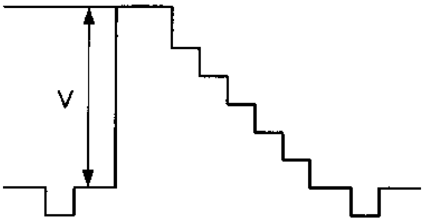
Oscilloscope trigger should be connect to Connector P2-16a



4.9.9. Composite Y Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV±7mV
TEST	Y OUT
ADJ.	VR352
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR455 so that the V is 700mV±7mV.



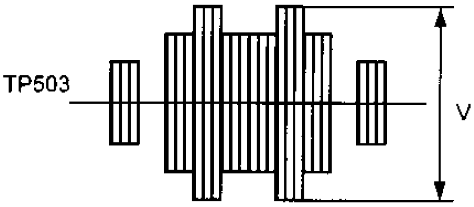
4.9.10. Composite Chroma Level Adj.

P.C.B.	V_IN (F6)
SPEC.	V = 400mV±20mV
TEST	TP503, GND:TG4
ADJ.	VR451
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR451 so that the V is 400mV±20mV.

NOTE:

Oscilloscope trigger should be connect to Connector P2-16a.



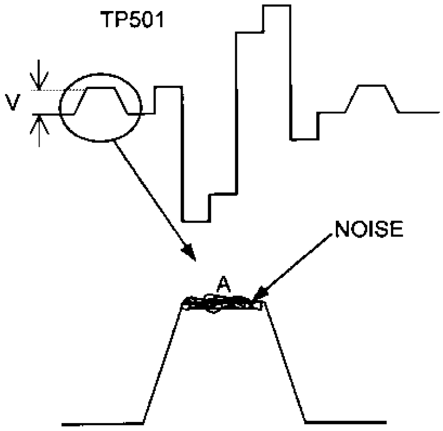
4.9.11. Composite Color Demodulation Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**See figure**
TEST	**TP501, GND:TG4**
ADJ.	**VR501, VR512**
INPUT	**COMPOSITE 75% Color Bar (Set up 7.5%)**
MODE	**EE**
TAPE	**———**
M.EQ	**Oscilloscope**

1. Turn VR512 to fully counter-clockwise.

2. Adjust VR501 so that the noise portion is positioned on the top of A portion as shown in figure.

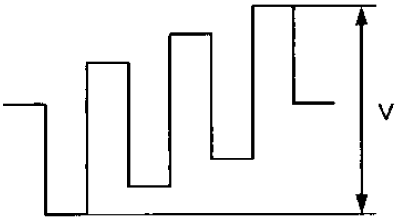
3. Adjust VR512 so that the level V is become 0Vp-p.



4.9.12. Composite PB Level Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**V = 486mV±7mV**
TEST	**PB OUT**
ADJ.	**VR505**
INPUT	**COMPOSITE 75% Color Bar (Set up 7.5%)**
MODE	**EE**
TAPE	**———**
M.EQ	**Waveform Monitor**

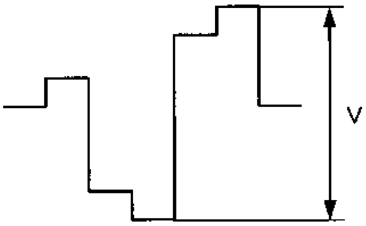
1. Adjust VR505 so that the V is 486mV±7mV



4.9.13. Composite PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 486mV±7mV
TEST	PR OUT
ADJ.	VR511
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR511 so that the V is 486mV±7mV



4.9.14. Composite YC Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	T = 0±10nsec
TEST	Y PR PB OUT
ADJ.	VR510 (PB), VR507 (PR)
INPUT	Composite IN : 12.5T Pulse & Bar
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

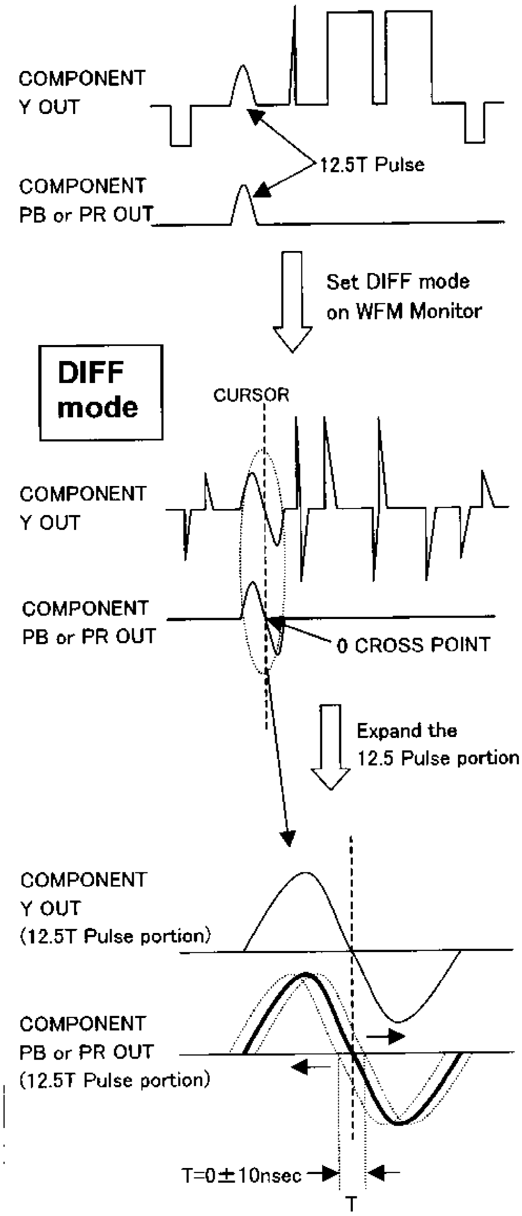
1. Confirm that the 12.5T Pulse & Bar signal appeared correctly on the scope with Component Y OUT as shown in figure.

2. Confirm that the 12.5T Pulse portion appeared correctly on the scope with Component PB and PR OUT as shown in figure.

3. Set WFM monitor to DIFF mode. In case of set the DIFF mode, waveform of Y, PB and PR signals are integrated as shown in figure.
4. Expand the 12.5 pulse portion (an ellipse dotted portion as indicated as figure) and set the cursor to 0 cross point as shown in figure.
5. Sine-wave is appeared on the scope by expansion as shown in figure.
6. Adjust VR510 (PB) and VR507 (PR) so that the phase synchronized between Y and PB, PR signals.

NOTE:

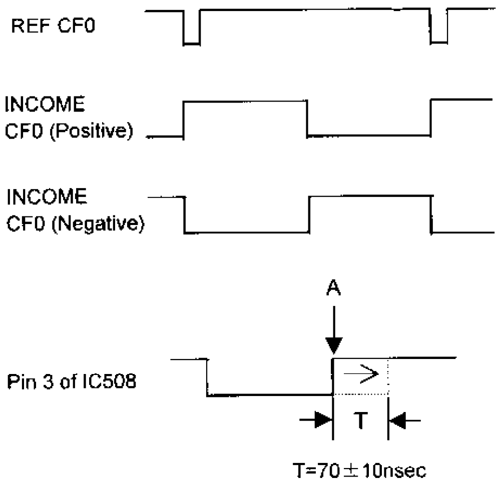
Please use type of WFM Monitor attached DIFF mode


COMPONENT
Y OUT
12.5T Pulse
COMPONENT
PB or PR OUT
Set DIFF mode
on WFM Monitor
DIFF
mode
CURSOR
COMPONENT
Y OUT
COMPONENT
PB or PR OUT
0 CROSS POINT
Expand the
12.5 Pulse portion
COMPONENT
Y OUT
(12.5T Pulse portion)
COMPONENT
PB or PR OUT
(12.5T Pulse portion)
T=0±10nsec
T

4.9.15. Composite SCH Detection Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**T = 70±10nsec**
TEST	**CF OUT (TEST SIG GEN) Connector P2-8C (INCOME CF0 pulse) Pin 3 of IC508**
ADJ.	**VR502**
INPUT	**COMPOSITE 75% Color Bar (Set up 7.5%)**
MODE	**EE**
TAPE	———
M.EQ	**Oscilloscope**

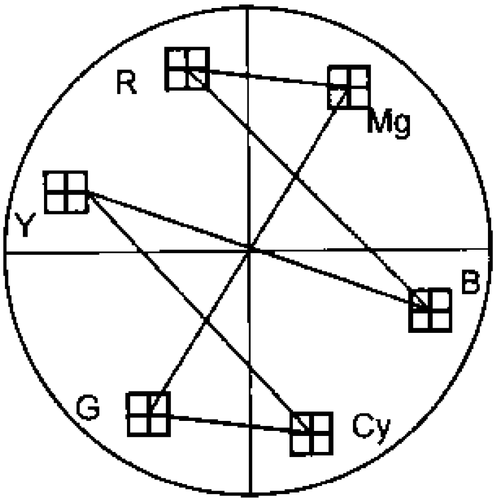
1. **Set VR502 fully CCW.**
2. **If Income CF0 pulse does not negative pulse, slowly turn VR502 CW and set the position where the Income CF0 pulse just changes from the positive to negative phase as shown in below figure.**
3. **Set the VR502 so that the phase of Income CF0 pulse just changes from the negative to positive position as shown in below figure.**
4. **Slowly turn VR502 CW so that the rising edge A delayed 70usec± 10nsec as shown in below figure.**


REF CF0
INCOME CF0 (Positive)
INCOME CF0 (Negative)
A
Pin 3 of IC508
T
T=70±10nsec

4.9.16. Composite Vector Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**All vector dots are In Inner Boxes**
TEST	**COMPOSITE OUT**
ADJ.	**VR512**
INPUT	**COMPOSITE 75% Color Bar (Set up 7.5%)**
MODE	**EE**
TAPE	**———**
M.EQ	**Vector Scope**

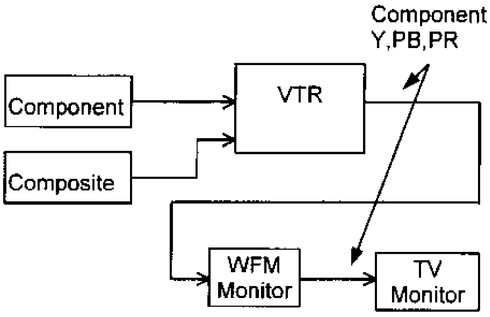
1. **Adjust VR512 so that the all vector dots are in the inner boxes.**



4.10. V IN P. C. Board [FOR PAL ONLY]

4.10.1. Preparation for Video In Adjustment

1. Connect the equipment as shown in the figure.
2. V IN P.C.Board adjustment should be performed after the V OUT P.C.Board adjustment.


Component
Y,PB,PR
Component
Composite
VTR
WFM
Monitor
TV
Monitor

4.10.2. 13.5MHz VCO Adjustment

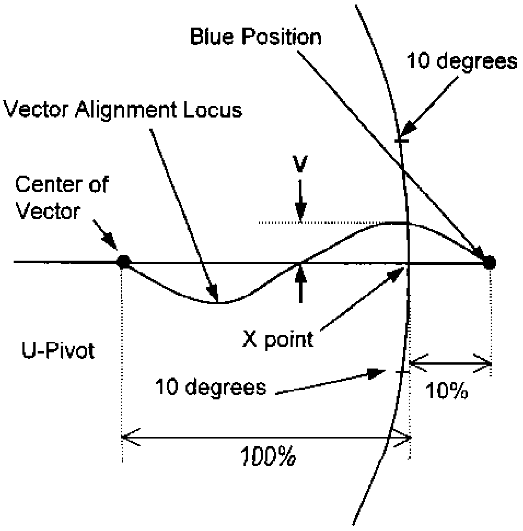
P.C.B.	**V_IN (F6)**
SPEC.	**0V± 0.1V**
TEST	**TP553, GND:TG6**
ADJ.	**VL551, VR552**
INPUT	**Component 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Oscilloscope**

1. Set VR552 to the center.
2. Adjust VL551 so that the DC Voltage is 0V± 0.1V.

4.10.3. Component Y Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	V =±0.5 degree
TEST	VIDEO OUT 1
ADJ.	VR551
INPUT	Composite 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Vector Scope

1. Connect the vector scope to composite out terminal.
2. Expand the Vector Alignment Locus, where the blue point position on vector scale (X point as shown in below figure) and set the Vector Alignment Locus on the u-pivot by adjust gain and phase VR on the vector scope.
3. Expand the Vector Alignment Locus 10% as compare with 100% as shown in below figure.
4. Adjust VR551 so that the vector adjustment locus is become straight, it should be in specification.


Blue Position
10 degrees
Vector Alignment Locus
V
Center of Vector
U-Pivot
X point
10 degrees
10%
100%

NOTE:

In case of use VM700A.

1. Set the blue point position to tip of U-Pivot.
2. Set the Average is ON of VM700A
3. Adjust VR551 so that the vector adjustment locus is match to X

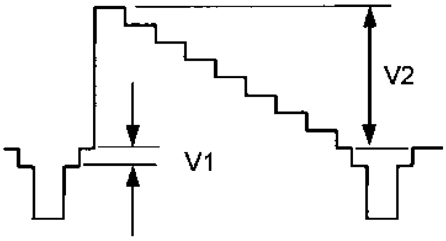
point, and it should be in specification.

4.10.4. Component Y Level Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**V1 = 0V±7mV, V2 = 700mV±7mV**
TEST	**Y OUT**
ADJ.	**VR652, VR651**
INPUT	**Component 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Waveform Monitor**

1. Adjust VR652 so that the V1 is 0V±7mV.

2. Adjust VR651 so that the V2 is 700mV±7mV.

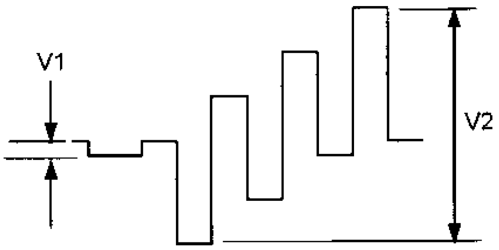


4.10.5. Component PB Level Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**V1 = 0V±7mV, V2 = 700mV±7mV**
TEST	**PB OUT**
ADJ.	**VR703, VR702**
INPUT	**Component 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Waveform Monitor**

1. Adjust VR703 so that the V1 is 0±7mV.

2. Adjust VR702 so that the V2 is 700m±7mV.

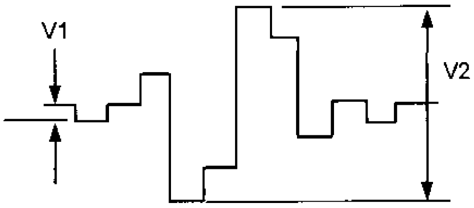


4.10.6. Component PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V±7mV, V2 = 700mV±7mV
TEST	PR OUT
ADJ.	VR753, VR752
INPUT	Component 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR753 so that the V1 is 0V±7mV.

2. Adjust VR752 so that the V2 is 700mV±7mV.

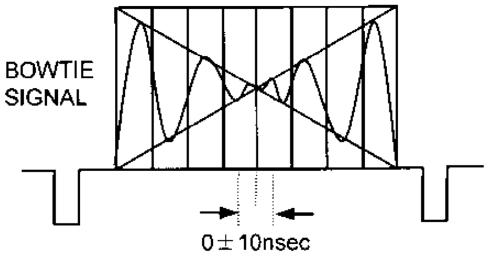


4.10.7. Component Y/C Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	0±10nsec
TEST	Y, PB, PR OUT
ADJ.	VR701 (PB), VR751 (PR)
INPUT	Component IN : BOWTIE
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR701 so that the minimum level of the Y/PB timing signal is 0±10nsec against the center scale.
Adjust VR751 so that the minimum level of the Y/PB timing signal

is 0±10nsec against the center scale.


BOWTIE
SIGNAL
0± 10nsec

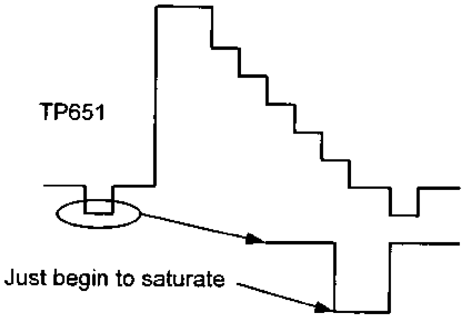
4.10.8. Composite Input Level Adjustment

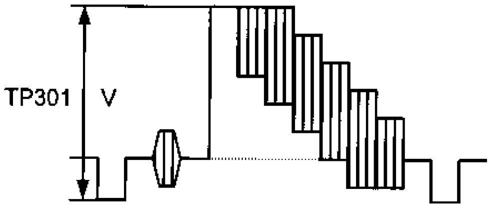
P.C.B.	**V_IN (F6)**
SPEC.	**V1 = 1.6V±0.02V**
TEST	**TP651, TP301, GND:TG6**
ADJ.	**VR301, VR251**
INPUT	**COMPOSITE 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Oscilloscope**

1. **Observe TP651 and adjust VR301 at the point where the sync tip just begin to saturate.**
2. **Adjust VR251 so that the voltage at TP301 is 1.6V±0.02V.**

NOTE:

Oscilloscope trigger should be connect to Connector P2-16a

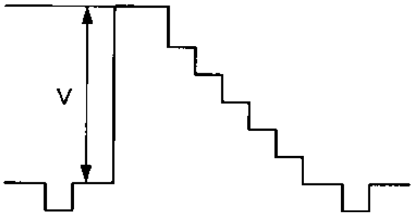

TP651
Just begin to saturate



4.10.9. Composite Y Level Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**V = 700mV±7mV**
TEST	**Y OUT**
ADJ.	**VR352**
INPUT	**COMPOSITE 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Waveform Monitor**

1. Adjust VR352 so that the V is 700mV±7mV.



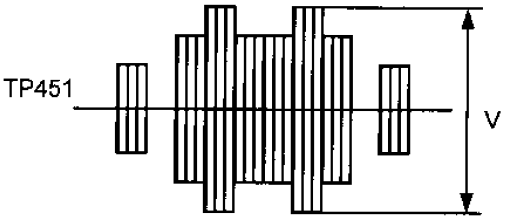
4.10.10. Composite Chroma Level Adj.

P.C.B.	**V_IN (F6)**
SPEC.	**V = 500mV±20mV**
TEST	**TP451, GND:TG6**
ADJ.	**VR351**
INPUT	**COMPOSITE 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Waveform Monitor**

1. Adjust VR351 so that the V is 500mV±20mV.

NOTE:

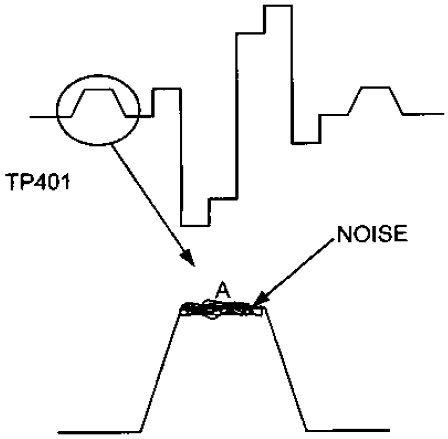
Oscilloscope trigger should be connect to Connector P2-16a.



4.10.11. Composite Colour Demodulation Adjustment

P.C.B.	V_IN (F6)
SPEC.	See figure
TEST	TP401, GND:TG6
ADJ.	VR408, VR409
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Oscilloscope

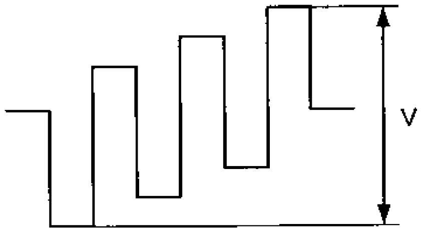
1. **Adjust VR409 so that the waveform is as shown in figure (no double image).**
2. **Adjust VR408 so that the noise portion is positioned on the top of A portion as shown in figure.**



4.10.12. Composite PB Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV±7mV
TEST	PB OUT
ADJ.	VR460
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

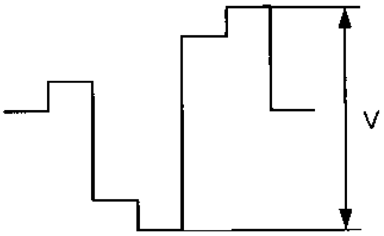
1. **Adjust VR460 so that the V is 700mV±7mV**



4.10.13. Composite PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV±7mV
TEST	PR OUT
ADJ.	VR464
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Adjust VR464 so that the V is 700mV±7mV



4.10.14. Composite YC Timing Adjustment

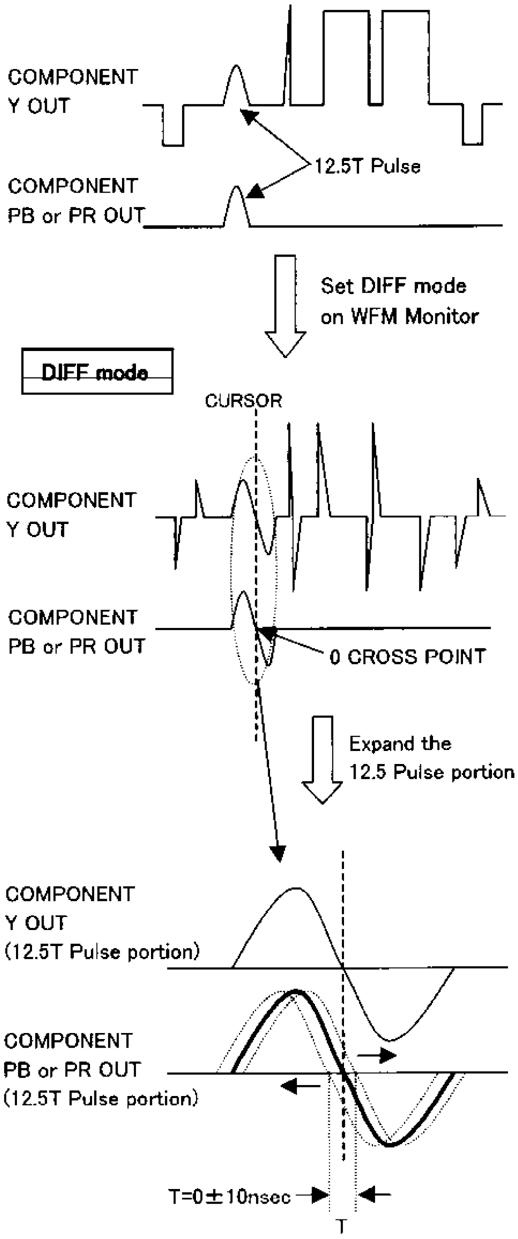
P.C.B.	V_IN (F6)
SPEC.	T = 0±10nsec
TEST	Y PR PB OUT
ADJ.	VR459 (PB), VR463 (PR)
INPUT	Composite IN : 12.5T Pulse & Bar
MODE	EE
TAPE	———
M.EQ	Waveform Monitor

1. Confirm that the 12.5T Pulse & Bar signal appeared correctly on the scope with Component Y OUT as shown in figure.
2. Confirm that the 12.5T Pulse portion appeared correctly on the scope with Component PB and PR OUT as shown in figure.

3. Set WFM monitor to DIFF mode. In case of set the DIFF mode, waveform of Y, PB and PR signals are integrated as shown in figure.
4. Expand the 12.5 pulse portion (an ellipse dotted portion as indicated as figure) and set the cursor to 0 cross point as shown in figure.
5. Sine-wave is appeared on the scope by expansion as shown in figure.
6. Adjust VR459 (PB) and VR463 (PR) so that the phase synchronized between Y and PB, PR signals.

NOTE:

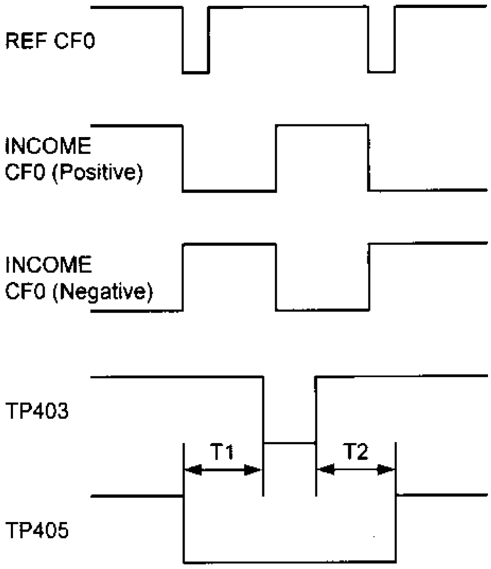
Please use type of WFM Monitor attached DIFF mode


COMPONENT
Y OUT
12.5T Pulse
COMPONENT
PB or PR OUT
Set DIFF mode
on WFM Monitor
DIFF mode
CURSOR
COMPONENT
Y OUT
COMPONENT
PB or PR OUT
0 CROSS POINT
Expand the
12.5 Pulse portion
COMPONENT
Y OUT
(12.5T Pulse portion)
COMPONENT
PB or PR OUT
(12.5T Pulse portion)
T=0±10nsec
T

4.10.15. Composite SCH Detection Adjustment

P.C.B.	V_IN (F6)
SPEC.	T1 = T2 :±0.5msec
TEST	CF OUT (TEST SIG GEN) Connector P2-8C (INCOME CF0 pulse) TP403, TP405
ADJ.	VR407
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	———
M.EQ	Oscilloscope

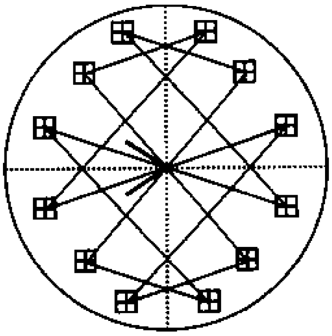
1. Set VR407 fully CCW.
2. If Income CF0 pulse does not negative pulse, slowly turn VR407 CW and set the position where the Income CF0 pulse just changes from the positive to negative phase as shown in below figure.
3. Set the VR407 so that the phase of Income CF0 pulse just changes from the negative to positive position as shown in below figure.
4. Slowly turn VR407 CW so that T1 and T2 portion in specification.



4.10.16. Composite Vector Adjustment

P.C.B.	**V_IN (F6)**
SPEC.	**All vector dots are in Inner Boxes**
TEST	**COMPOSITE OUT**
ADJ.	**VR409**
INPUT	**COMPOSITE 100% Colour Bar**
MODE	**EE**
TAPE	**———**
M.EQ	**Vector Scope**

1. Adjust VR409 so that the all vector dots are in the inner boxes.



4.11. AUDIO ADDA

4.11.1. Initial Setting of Audio Adjustment

< Switch Setting >

1. Set the audio impedance switches as shown below.

SW1	**HIGH**
SW41	**HIGH**

< Measurement Equipment Setting >

1. In case of use Audio Precision, please set switches as shown below.

GENERATOR

OUTPUT	**A & B**	**BAL**
	50 ohm	**FLOAT**

ANALYZER

CHANNEL-A	**INPUT**	**100 k Ω**
CHANNEL-B	**INPUT**	**100 k Ω**

< Service Menu Setting >

1. Set the DIP SW 1-1 to ON at the reverse side of the front panel.
2. Open the Audio Adjust menu on the Service Menu.
3. Set the items as shown below.

E01	METER REF.	Fs - 20
E05	REF. LEVEL2	0 dB
E07	MIC IN LV	ENA

4. Set the DIP SW 1-1 to OFF.

< User Menu Setting >

1. Open the AUDIO item (No. 700 series) of the SETUP-MENU and set the items as shown below.

700	CH1 IN LV	0 dB
701	CH2 IN LV	0 dB
703	CH1 OUT LV	0 dB
704	CH2 OUT LV	0 dB
706	MONI L OUT LV	0 dB
707	MONI R OUT LV	0 dB
708	MONI OUT	VAR
709	EMPHASIS	OFF
714	REC CH1	CH1
715	REC CH2	CH2
722	INT SG	OFF

4.11.2. Output Balance Adjustment

P.C.B.	A ADDA (F8)
SPEC.	Minimum
TEST	AUDIO OUT : CH1, CH2 MONIOUT : LCH, RCH
ADJ.	VR402 (CH1), VR477 (CH2) VR751 (LCH), VR831 (RCH)
INPUT	INT Signal
MODE	EE
TAPE	———
M.EQ	Oscilloscope, Monitor TV

1. Set the items on SET UP menu as shown below.

708	MONI OUT	UNITY
722	INT SG	ON

2. Connect to the oscilloscope as shown below.

Oscilloscope	Output (VTR)
CH1	HOT (AUDIO OUT, MONI OUT)
CH2	COLD (AUDIO OUT, MONI OUT)

3. Set the oscilloscope's mode to ADD, and adjust VR402 so that the CH1 waveform level is minimum.
4. Repeat above adjustment in the same way about the other channels.

4.11.3. Output Level Adjustment

P.C.B.	A ADDA (F8)
SPEC.	0dBu (0.2dBu
TEST	AUDIO OUT : CH1, CH2 MONIOUT : LCH, RCH
ADJ.	VR401 (CH1), VR476 (CH2) VR702 (LCH), VR701 (RCH)
INPUT	INT Signal
MODE	EE
TAPE	———
M.EQ	Oscilloscope, Audio Analyzer VTVM (Audio Precision)

1. Set the AUDIO item as shown below.

708	MONI OUT	UNITY
722	INT SG	ON

2. Adjust VR401 so that the CH1 level is in the specification.
3. Repeat above adjustment in the same way about the other channels.
4. Confirm all channels that the sine-wave output is normal.

4.11.4. Input CMRR Adjustment

P.C.B.	A ADDA (F8)
SPEC.	Less than -60dBu
TEST	TP201 (CH1), TP202 (CH2)
ADJ.	VR1 (CH1), VR41 (CH2)
INPUT	LINE IN (CH1, CH2) 1kHz, 0dBu Sine-wave (CMTST)
MODE	EE
TAPE	———
M.EQ	Oscilloscope, VTVM (Audio Precision), Monitor TV

1. Connect the oscilloscope to TP201.
2. Input the sine-wave signal to HOT and COLD terminal of CH1.
3. Adjust VR1 so that the CH1 output level is minimum and in the specification.
4. Repeat adjustment in the same way about CH2.

NOTE:

In case of use Audio Precision, Change the GENERATOR OUTPUT mode to CMTS from BAL.. And after adjustment, return to BAL.

4.11.5. Input Level Adjustment

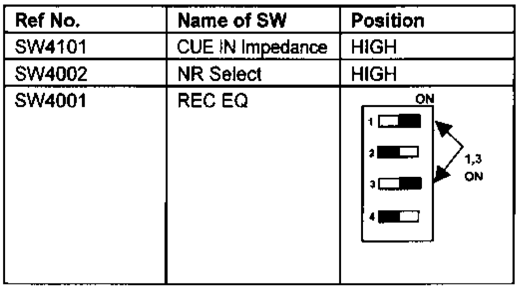
P.C.B.	A ADDA (F8)
SPEC.	0dBu (0.2dBu
TEST	AUDIO OUT (CH1, CH2)
ADJ.	VR2 (CH1), VR42 (CH2)
INPUT	ALINE IN (CH1,CH2) 1kHz 0dBu Sine-wave (BAL)
MODE	EE
TAPE	———
M.EQ	Oscilloscope, VTVM (Audio Precision), Monitor TV

1. Adjust VR2 so that the CH1 level is in the specification.
2. Repeat adjustment in the same way about CH2.

4.12. CUE

4.12.1. Initial Setting of CUE Adjustment

1. Set the CUE REC VR and CUE PB VR to UNITY on Front Panel.
2. Set the switches indicated as below.



Ref No.	Name of SW	Position
SW4101	CUE IN Impedance	HIGH
SW4002	NR Select	HIGH
SW4001	REC EQ	

ON
1
2
3
4
1,3
ON

Condition of Input and Output

OSC Output Impedance	**Less than 50 ohm (Balance Out)**
Input Impedance	**More than 100Kohm (Balance In)**

4.12.2. CTL Erase Frequency Adj.

P.C.B.	**CUE (H2)**
SPEC.	**70kHz±0.2kHz**
TEST	**TP4202, TG201 (GND)**
ADJ.	**T4201**
INPUT	**———**
MODE	**REC**
TAPE	**Blank Tape**
M.EQ	**Frequency Counter**

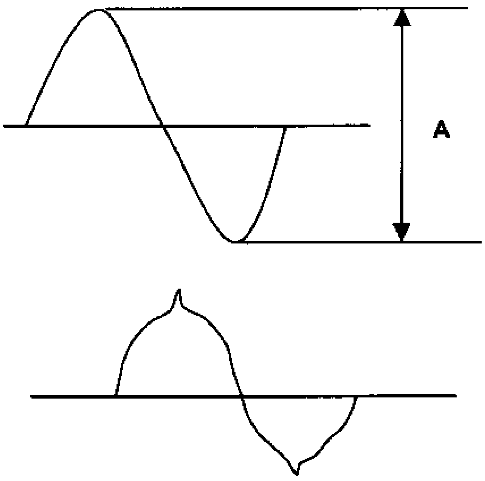
1. Adjust T4201 so that the frequency level is in the specification.

4.12.3. CTL Erase/CUE Erase Current Adjustment

P.C.B.	**CUE (H2)**
SPEC.	**A = more than 240mVp-p**
TEST	**TP4203 (CTL), TP4202 (CUE) TG4201 (GND)**
ADJ.	**T4204 (CTL), T4203 (CUE)**
INPUT	**———**
MODE	**REC**
TAPE	**Blank Tape**
M.EQ	**Oscilloscope**

1. Adjust T4204 so that the voltage at TP4203 is in the specification.

2. Adjust T4203 so that the voltage at TP4202 is in the specification.



Bottom Picture shows bad waveform style.

4.12.4. CUE Bias Current Adjustment

P.C.B.	**CUE (H2)**
SPEC.	**7 mVrms ± 0.5 mVrms (19.7mVp-p ± 1.5mVp-p)**
TEST	**TP4002 (GND: TP4003)**
ADJ.	**T4202, VR4202**
INPUT	**———**
MODE	**REC**
TAPE	**Blank Tape**
M.EQ	**Vacuum Tube Volt Meter**

1. **Connect the Vacuum Tube Volt Meter between TP4002 and TP4003 (GND) and confirm the voltage is in the specification.**
2. **If it is out of specification, adjust T4202 so that the level becomes maximum and adjust VR4202 so that the level is in the specification.**

4.12.5. CUE PB Level Adjustment

P.C.B.	CUE (H2)
SPEC.	0dBu ± 0.5dBu
TEST	CUE OUT (XLR Connector)
ADJ.	VR4002
INPUT	———
MODE	PLAY
TAPE	NTSC: VFM3580KM (0 to 14 min) PAL: VFM3680KM (0 to 10 min)
M.EQ	Audio Analyzer

1. Playback CUE Level master part of the alignment tape and adjust VR4002 so that the CUE OUT level is in the specification.

4.12.6. CUE Noise Cancel Adjustment

P.C.B.	CUE (H2)
SPEC.	Less than -40dBu
TEST	CUE OUT
ADJ.	VR4003, VR4006
INPUT	———
MODE	PLAY
TAPE	Blank Tape (NO Recorded portion)
M.EQ	Audio Analyzer

1. Connect the Audio Analyzer to CUE OUT with 1/3 OCT BPF (600Hz) and the noise level is in the specification.
2. If it is not adjust VR4003 and then adjust VR4006 so that the noise level is in the specification.
3. If it is not, repeat item 2.

NOTE:

In case of use Audio Precision, set indicated as below.
MEASURE: BANDPASS
BP/BR FREQ: 600Hz
FILTER: OFF

4.12.7. CUE REC/PB Level Adjustment

P.C.B.	CUE (H2)
SPEC.	0 dBu ± 1 dBu
TEST	CUE OUT (XLR Connector)
ADJ.	VR4001
INPUT	1KHz, 0 dBu Sine-wave (BAL)
MODE	REC
TAPE	Blank Tape
M.EQ	Audio Analyzer

1. **Supply a 1KHz, 0dBu signal into the CUE Input and record the input signal for a few minutes.**
2. **Playback the just recorded portion.**
3. **Adjust VR4001 so that the CUE OUT level is in the specification.**

NOTE:

In case of use Audio Precision, set indicated as below.
MEASURE: AMPLITUDE
BP/BR FREQ: AUTO
FILTER: OFF
BANDWIDTH: 22Hz, 22KHz

5. Exploded Views & Parts List

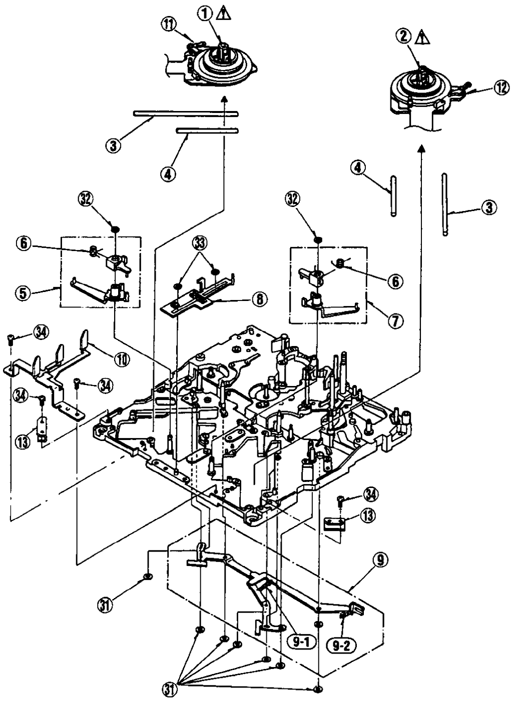
5.1. SERVICING FIXTURES & TOOLS

SERVICING FIXTURES & TOOLS

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VFK1145	BACK TENSION METER	1	
2	VFK1149	POST DRIVER	1	
3	VFK71	DIAL TORQUE GAUGE (150 G)	1	
4	VFK1191	DIAL TORQUE GAUGE (45G)	1	
5	VFK1152	DIAL TORQUE GAUGE ADAPTOR	1	
6	VFK0357	ECCENTRIC SCREWDRIVER	1	
7	VFK1154	POST HEIGHT FIXTURE	1	
8	VFK1153	MECH. NEUTRAL PLATE	1	
9	VFK0906	OIL	1	
10	VFK1155	REV POSITION TOOL	1	
11	VFK1156	PLAY POSITION TOOL	1	
12	VFK1208	NEUTRAL POSITION TOOL	1	
13	VFK1150	NUT DRIVER (5.5MM)	1	
14	VFK1151	NUT DRIVER (2.5MM)	1	
15	VFK1188	DIAL TENSION GAUGE (30G)	1	
16	VFK0948A	CHECK LIGHT	1	
17	VFK0749	FROIRAL GREASE	1	
18	M0R265	MORLYTONE GREASE	1	
19	VFK1146	PHILIPS DRIVER (FINE)	1	
20	VFK1147	PHILIPS DRIVER (FINE)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
21	VFK1148	HEX. DRIVER (1.5)	1	
22	VFK1178	HEX. DRIVER (0.89)	1	
23	VFK1179	HEX. DRIVER (0.71)	1	
24	VFK1190	HEX. WRENCH	1	
25	VFK1209	TORQUE DRIVER	1	
26	VFK1375	POST AXIS DRIVER (1.5MM)	1	
27	VFK1300	A/D BOARD	1	
28	VFM3580KM	ALIGNMENT TAPE (NO.1)	1	FOR NTSC
29	VFM3581KM	ALIGNMENT TAPE (NO.2)	1	FOR NTSC
30	VFM3582KM	ALIGNMENT TAPE (NO.3)	1	FOR NTSC
31	VFM3680KM	ALIGNMENT TAPE (NO.1)	1	FOR PAL
32	VFM3681KM	ALIGNMENT TAPE (NO.2)	1	FOR PAL
33	VFM3682KM	ALIGNMENT TAPE (NO.3)	1	FOR PAL
34	VFM3000EDS	ALIGNMENT TAPE (DV LISTA)	1	
35	VFM3010EDS	ALIGNMENT TAPE	1	FOR NTSC
36	VFM3110EDS	ALIGNMENT TAPE	1	FOR PAL
37	AJ-CL12MP	CLEANING TAPE	1	
38	VFK1481	LISTA SOFTWARE	1	
39	VFK1186	LISTA CABLE	1	
40	VFK1423	TAPE DET. SENSOR CASSETTE	1	
41	VZZ0095	CLEANING CROSS	1	
42	VFK1248A	FLASH ROM VERSION UP SOFT	1	
43	VFK1304A	ROM REWRITER	1	
44	VFK1305	120P EXTENDER	1	
45	VFK1307	70P EXTENDER	1	
46	VFK1306	52P EXTENDER	1	
47	VFK0369	TWEEZERS	1	
47	VFK0371	RADIO PRIER	1	
48	VFK0372	CUTTER PRIER	1	
49	VFK0338	TRIMMER ADJUSTMENT DRIVER	1	
50	VFK0337	PHILIPS DRIVER	1	

5.2. Mechanical Chassis Assembly (1)

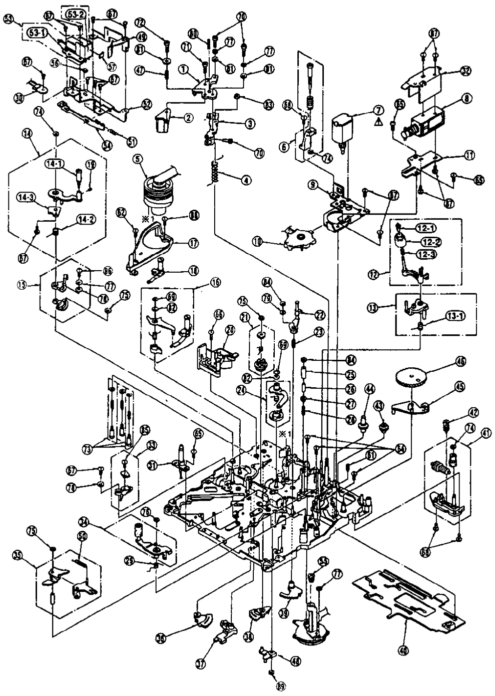


Mechanical Chassis Assembly (1)

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VEM0686	S REEL MOTOR A ASS'Y	1	(M)
2	VEM0687	T REEL MOTOR A ASS'Y	1	(M)
3	VMS5923	REEL OUTER RAIL	2	
4	VMS5924	REEL INNER RAIL	2	
5	VXL2589	S BASE DRIVE ARM ASS'Y	1	
6	VMB2944	CHARGE SPRING	2	
7	VXL2590	T BASE DRIVE ARM ASS'Y	1	
8	VXA5625	SLIDE ROD ASS'Y	1	
9	VXL2597	M STOPPER DRIVE ARM ASS'Y	1	
9-1	VMB2955	M STOPPER SPRING (1)	1	
9-2	VMB3017	M STOPPER SPRING (2)	1	
10	VXA6174	L-M RELEASE ANGLE ASS'Y	1	
11	VXZ0439	S BRAKE ARM ASS'Y	1	
12	VXZ0440	T BRAKE ARM ASS'Y	1	
13	VMZ2603	REEL FLEX COVER	2	
31	VMX1061	WASHER	7	
32	VMX1079	CUT WASHER	2	
33	VMX1394	CUT WASHER	2	
34	XQN2+CF3	SCREW	4	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.3. Mechanical Chassis Assembly (2)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Mechanical Chassis Assembly (2)

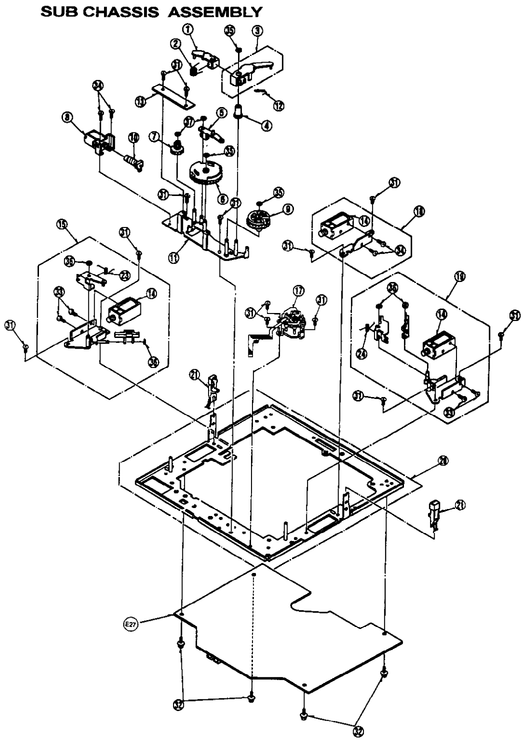
Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VXA5554	A/C HEAD BASE (1) ASS'Y	1	
2	VED0419	A/C HEAD	1	(M)
3	VXA6067	A/C HEAD BASE (2) ASS'Y	1	
4	VMB2935	A/C HEAD HIGHT SPRING	1	
5	VEG1498	CYLINDER UNIT	1	(M)
6	VXA5715	EMARGENCY SHIFT HOLDER	1	
7	VEM0645	LOADING MOTOR (1)A ASS'Y	1	(M)
8	VSJ0227	PINCH SOLENOID	1	(M)
9	VXA5584	MOTOR ANGLE ASS'Y	1	
10	VES0814	MODE SW ASS'Y	1	(M)
11	VMA9376	PINCH SOLENOID BASE	1	
12	VXL2748	CLEANING ARM A ASS'Y	1	(M)
12-1	VMX2150	CLEANER ROLLER HOLDER	1	
12-2	VXP1808	CLEANER ROLLER ASS'Y	1	
12-3	VMB3114	CLEANER ROLLER SPRING	1	
13	VXL2870	T2 ARM ASS'Y	1	
13-1	VMB3304	T2 ARM SPRING	1	
14	VXL2831	TENSION ARM A ASS'Y	1	(M)
14-1	VXP1761	TENSION ROLLER	1	
14-2	VMB3220	TENSION LEG SPRING	1	
14-3	VXA6173	MAGNET HOLDER ASS'Y	1	
15	VXA5791	TENSION LEG SPRING HOOK	1	
16	VXL2709	S1 LOADING ARM ASS'Y	1	(M)
17	VMD2533	LOADING RAIL	1	
18	VXA6378	T1 BOAT ASS'Y	1	(M)
19	VHD0561	HEX SCREW	1	
20	VXA6052	S POST BASE AU.	1	(M)
21	VXP1683	T4 CONNECTION GEAR ASS'Y	1	
22	VXL2772	T4 ARM ASS'Y	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
23	VMB2950	T4 THRUST SPRING	1	
24	VXL2898	T LOADING ARM N ASS'Y	1	
25	VMS5906	T3 UPPER FRANGE	1	
26	VMS5905	T3 SLEEVE	1	
27	VMS5904	T3 LOWER FRANGE	1	
28	VMB2929	T3 SPRING	1	
29	VMB2933	PINCH RELEASE SPRING	1	
30	VEK7927	INSULLATION SENSOR	1	
31	VEK7691	LED HOLDER P.C.BOARD	1	
32	VMA9411	PINCH SOLENOID ANGLE	1	
33	VXA5820	TENSION SENSOR ASS'Y	1	
34	VXL2835	PINCH ARM ASS'Y	1	(M)
35	VXL2588	PINCH GUIDE ARM ASS'Y	1	
36	VXA5570	T SECTOR GEAR ASS'Y	1	
37	VXL2838	TENSION LEG. GUIDE ARM	1	
38	VXA5567	S SECTOR GEAR ASS'Y	1	
39	VXA5564	T4 SECTOR GEAR ASS'Y	1	
40	VXA5563	MAIN ROD ASS'Y	1	
41	VXA5627	THRUST SHAFT HOLDER ASS'Y	1	
42	VDG1166	MOTOR WARM GEAR	1	
43	VDG1268	MOTOR EMARGENCY GEAR A(A)	1	
44	VDG1267	MOTOR EMARGENCY GEAR B(A)	1	
45	VXL2889	MAIN CAM ARM ASS'Y	1	
46	VDG1168	MAIN CAM GEAR	1	(M)
47	VMB2937	A/C HEAD ADJUST SPRING	1	
48	VXL2600	EJECT ARM ASS'Y	1	
49	VMD3475	T1 GUIDE ASS'Y	1	
50	VMB2934	SPRING	1	
51	VMB3051	CLEANER RETURN SPRING	1	
52	VXA6077	CLEANER BASE 1 ASS'Y	1	
53	VXA6078	CLEANER SOLENOID ASS'Y	1	
53-1	VSJ0226	CLEANER SOLENOID	1	(M)
53-2	VMA9877	CLEANER SOLENOID BASE	1	
54	VMM0429	CLEANER INTERLOCK	1	
55	VXQ0556	THRUST SCREW ASS'Y	1	(M)
56	VMT0871	SILENCER A	1	
57	VMT0872	SILENCER B	1	
61	VHD0356	SCREW	1	
62	XQN2+A3	SCREW	1	
64	XQN2+A35FZ	SCREW	3	
65	XQN2+AM2	SCREW	3	
66	XQN2+AM4	SCREW	1	
67	XQN2+CF3	SCREW	12	
68	XQN2+CF4	SCREW	3	
69	XUC12FP	E-RING	2	
70	XVE2B4FZ	HEX SCREW	3	
71	XVE2B6FP	HEX SCREW	1	
72	XVE2B12FP	HEX SCREW	1	
73	VXQ0439	SCREW	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
74	VMX0967	CUT WASHER	3	
75	VMX1061	WASHER	3	
76	VMX1079	CUT WASHER	1	
77	XWA2B	WASHER	4	
78	XWE2	WASHER	2	
79	XWE16VW	WASHER	1	
80	XXE2A6FP	HEX SCREW	1	
81	XWG2	WASHER	3	
82	XWGV15Z32G	WASHER	2	
83	VHD0045	NYLON NUT	1	
84	VHN0312	NUT	2	
85	XQN2+AQ3.5FZ	SCREW	1	
86	XQN2+AJ5	SCREW	1	
87	XQN2+A1.5	SCREW	4	
88	XQN2+A4	SCREW	1	
89	VMX1394	CUT WASHER	1	
*	VXY1431Z1	MECHANISM	1	(M)

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.4. Sub Chassis Assembly


SUB CHASSIS ASSEMBLY
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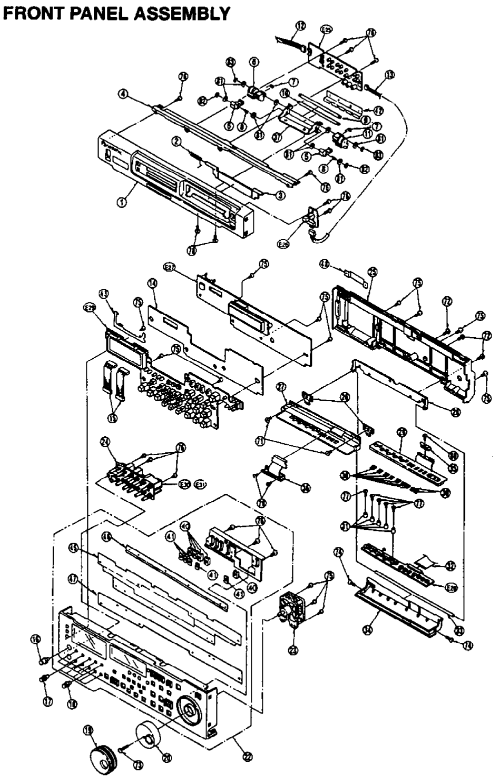
Sub Chassis Assembly

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VXL2656	MIC DRIVE ARM (A) ASS'Y	1	
2	VMB3018	MIC DRIVE SPRING	1	
3	VXL2657	MIC DRIVE ARM (B) ASS'Y	1	
4	VDB1429	MIC DRIVE ARM BOSS	1	
5	VXL2613	REEL DRIVE ARM ASS'Y	1	
6	VDG1192	REEL DRIVE CAM GEAR	1	
7	VDG1193	REEL DRIVE WORM WHEEL	1	
8	VEM0585	REEL DRIVE MOTOR ASS'Y	1	(M)
9	VDG1211	MIC GENEVA GEAR	1	
10	VXP1698	REEL DRIVE WORM ASS'Y	1	
11	VXA5628	MOTOR BASE ASS'Y	1	
12	VMB3019	MIC DRIVE RETURN SPRING	1	
13	VEK7726	REEL SENSOR P.C.BOARD	1	
14	VSJ0216	BRAKE SOLENOID	3	(M)
15	VXA5575	S-BRAKE SOLENOID BASE	1	
17	VXA6199	DISTINCTION SW ASS'Y	1	(M)
18	VXA5579	M STOPPER SOLENOID ASS'Y	1	
19	VXA5887	T-BRAKE SOLENOID BASE ASS	1	
20	VXK1336	SUB CHASSIS	1	
21	VEK7692	SENSOR HOLDER ASS'Y	1	
22	VMS6193	T BRAKE RELEASE ARM SHAFT	1	
23	VMB2957	S BRAKE SPRING	1	
24	VMB2987	T BRAKE SPRING	1	
31	XQN2+CF3	SCREW	13	
32	XYN26+K6	SCREW	4	
33	XQN2+A1.5	SCREW	2	
34	XQN2+A2	SCREW	2	
35	VMX1079	CUT WASHER	5	
36	VMX0967	CUT WASHER	4	
37	VMX1548	CUT WASHER	2	
38	XQN2+A1.5	SCREW	4	
E27	VEP82216B	MECH I/F P.C.BOARD	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.5. Front Panel Assembly


FRONT PANEL ASSEMBLY

Front Panel Assembly

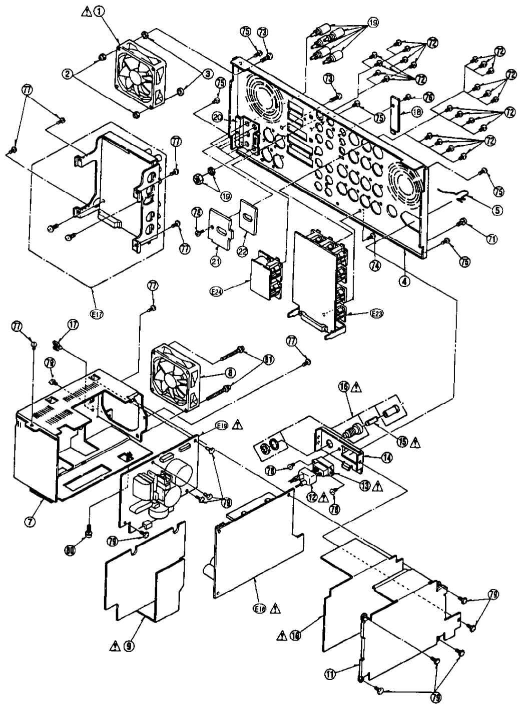
Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VYP6737	UPPER FRONT PANEL 1 ASS'Y	1	FOR AJ-D850P
1	VYP6737	UPPER FRONT PANEL 1 ASS'Y	1	FOR AJ-D850E
2	VMB2923	BLINDER SPRING	1	
3	VKF2785	BLINDER PANEL	1	
4	VMP4864	UPPER FRONT PANEL ANGLE	1	
5	VDK0147	CASSETTE GUIDE CAM	2	
6	VGQ4009	CASSETTE GUIDE (L)	1	
7	VMB2922	CASSETTE GUIDE SPRING	2	
8	VMB2986	CAM SPRING	2	
9	VMS5864	CASSETTE COVER	1	
10	VMS6017	GUIDE CAM SHAFT	1	
11	VGQ4010	CASSETTE GUIDE (R)	1	
12	VEE9649	UP FRONT CONNECTION CABLE 1	1	
13	VEE9650	UP FRONT CONNECTION CABLE 2	1	
14	VMZ2501	INSULATION SHEET	1	
15	VEE9640	FRONT SW CABLE	2	
16	VGU5334	LEVER VR KNOB	1	
17	VXU0768-1	VR KNOB ASS'Y	3	
18	VXU1160	REC VR KNOB ASS'Y	4	
19	VGU5780	SEARCH DIAL COVER	1	
20	VGU8126	SEARCH DIAL KNOB	1	
22	VYP6732	LOWER FRONT PANEL 1 ASS'Y	1	
23	VSP1097	SEARCH DIAL	1	
24	VMP4860	VR ANGLE	1	
25	VKU0513	BACK COVER	1	FOR AJ-D850P
25	VKU0524	BACK COVER	1	FOR AJ-D850E
26	VMB2978	LEAF SPRING	2	
27	VGM1288	SUB CONTROL SUPPORT ANGLE	1	
28	VGM1287	SUB CONTROL ANGLE	1	
29	VGM1269	SUB SW ANGLE	1	FOR AJ-D850P
29	VGM1359	SUB SW ANGLE	1	FOR AJ-D850E
30	VGU7179	SLIDE SW KNOB	10	
32	VWJ28C2120L0	FR CPU SUB FFC	1	
33	VMS6012	SHAFT	1	
34	VKF2497	SUB SW DOOR	1	
35	VMC1241	EARTH PLATE	1	
36	VMP5091	EARTH PLATE SUB	1	
37	VMP4863	CASSETTE GUIDE ANGLE	1	
38	VMC1277	HEAD PHONE EARTH SPRING	1	
39	VMZ2671	SPACER	1	
40	VGU5287	SLIDE KNOB	5	
41	VGF0659	SLIDE KNOB SHEET	5	
42	VMC1319	FRAME EARTH PLATE	1	FOR AJ-D850E
43	VMP5259	FIXING PLATE	1	FOR AJ-D850E
45	VSC4594	PANEL EARTH SHEET	1	FOR AJ-D850E
46	VMP5262	INSTALLTION PANEL A	1	FOR AJ-D850E
47	VMC1317	INSTALLTION PANEL A	1	FOR AJ-D850E
48	VMP5260	FRONT SW CABLE ANGLE	1	FOR AJ-D850E
71	XSB3+6FZ	SCREW	2	
72	XSB3+8FZ	SCREW	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
73	XSN2+8	SCREW	1	
74	XSS26+6FZ	SCREW	2	
75	XTN4+10G	SCREW	13	
76	XTV3+8G	SCREW	16	
77	XQN14+C4	SCREW	5	
78	XTV3+8F	SCREW	2	
79	XSN2+3	SCREW	2	
80	XSN26+3	SCREW	1	
81	VMX2562	WASHER	8	
82	XUC2FP	E-RING	2	
83	XUC25FP	E-RING	2	
84	XSB3+4	SCREW	1	FOR AJ-D850E
85	XSB26+5	SCREW	1	FOR AJ-D850E
86	XTV3+6F	SCREW	2	
E20	VEP80A76A	UP FRONT 1 P.C.BOARD	1	
E21	VEP80852A	UP FRONT 2 P.C.BOARD	1	
E22	VEP86263B	UP FRONT 2 P.C.BOARD	1	
E23	VEP86148A	FRONT CPU SUB P.C.BOARD	1	
E24	VEP80A49B	FRONT SW P.C.BOARD	1	
E25	VEP80963C	FRONT VR 1 P.C.BOARD	1	
E26	VEP80964C	FRONT VR 2 P.C.BOARD	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.6. Rear Panel Assembly

REAR PANEL ASSEMBLY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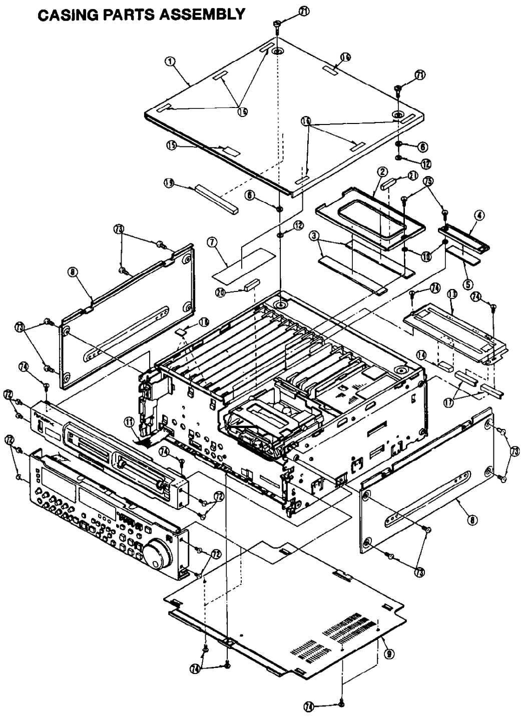
Rear Panel Assembly

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VRF0190	FAN MOTOR	1	
2	VHN0063	NYLON NUT	2	
3	VMX0835	SPACER	2	
4	VJH0939	JACK PANEL	1	FOR AJ-D850P
4	VJH1079	JACK PANEL	1	FOR AJ-D850E
5	VML2903	AC CORD HOOK	1	
7	VSC4387	POWER SUPPLY CASE A	1	
8	VRF0190	FAN MOTOR	1	
9	VMZ2502	SHIELD SHEET A	1	
10	VMZ2503	SHIELD SHEET B	1	
11	VSC4388	POWER SUPPLY CASE B	1	
12	VMZ1252	AC INLET COVER	1	
13	VJP0083	AC INLET	1	
14	VMP4889	AC INLET BRACKET	1	
15	XBA1C50NB5	FUSE	1	FOR AJ-D850P
15	XBA2C40TH15	FUSE	1	FOR AJ-D850E
16	VJF1005	FUSE HOLDER	1	
17	VJF0285	WIRE LOCKING SADDLE	4	
23	VMP5032	OPTION PANEL	1	
24	VEE9648	AES/EBU CABLE	1	
25	VMT0884	GASKET (O)	1	FOR AJ-D850E
26	VEK8447	POWER SUPPLY ASS'Y	1	FOR AJ-D850P
26	VEK8448	POWER SUPPLY ASS'Y	1	FOR AJ-D850E
71	VHD0426	SCREW	1	
72	XSN26+6FZ	SCREW	22	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
73	XSN4+35FC	SCREW	2	
74	XTN26+6FFZ	SCREW	1	
75	XTV3+6F	SCREW	5	
76	XTV3+6FFZ	SCREW	2	
77	XTV3+6FFR	SCREW	7	
78	XSB3+6FZ	SCREW	2	
79	XTW3+8LR	SCREW	10	
80	XYE4+EF8	SCREW	1	
81	XYNV4+K35FCS	SCREW	2	
E14	VEP83224A	V/S JACK P.C.BOARD	1	
E15	VEP81183A	POWER 1 P.C.BOARD	1	
E16	VEP81184B	POWER 2 P.C.BOARD	1	
E18	VEP84183A	A JACK P.C.BOARD	1	
E19	VEP84187A	AES/EBU P.C.BOARD	1	

5.7. Casing Parts Assembly

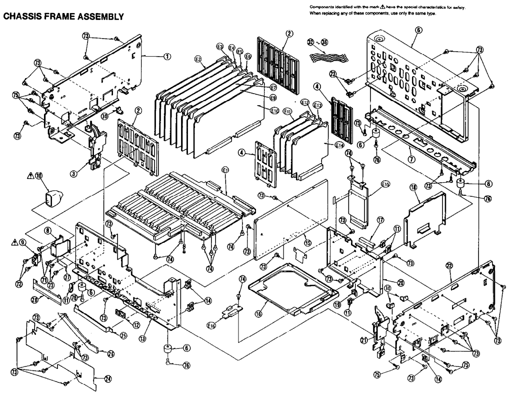


Casing Parts Assembly

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VYP6496	TOP PANEL	1	
2	VMP4884	P.C.BOARD PLATE L	1	
3	VMX2511	P.C.BOARD RUBBER CUSHION L	2	
4	VMP4885	P.C.BOARD PLATE S	1	
5	VMX2512	P.C.BOARD RUBBER CUSHION S	1	
6	VMX2510	SPACER	2	
7	VMZ2325	TOP PANEL BARRIER	1	
8	VGM1567	SIDE PANEL	2	FOR AJ-D850P
8	VGM1271	SIDE PANEL	1	FOR AJ-D850E
9	VKU0514	BOTTOM PLATE	1	
10	VMX1558	NYLON WASHER	2	
11	VEE9641	FRONT CABLE	1	
12	VMX2582	WASHER	2	
13	VMP5265	CARRIAGE SUPPORT	1	
14	VMT0797	GASKET C	1	
15	VMT0509	GASKET (B)	1	FOR AJ-D850E
16	VMT0800	GASKET (C)	1	FOR AJ-D850E
17	VMT0776	GASKET (F)	1	FOR AJ-D850E
18	VMT0797	GASKET C	3	
19	VMT0785	DUST PROOF CUSHION (B)	1	
20	VMT0786	DUST PROOF CUSHION (C)	1	
21	VMT0890	DUST PROOF CUSHION (C)	1	
75	XYN3+K8	SCREW	2	
74	XTV3+6F	SCREW	3	
73	XSB4+8FC	SCREW	8	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
72	XSB3+8FZ	SCREW	8	
71	VHD0274	SCREW	2	

5.8. Chassis Frame Assembly

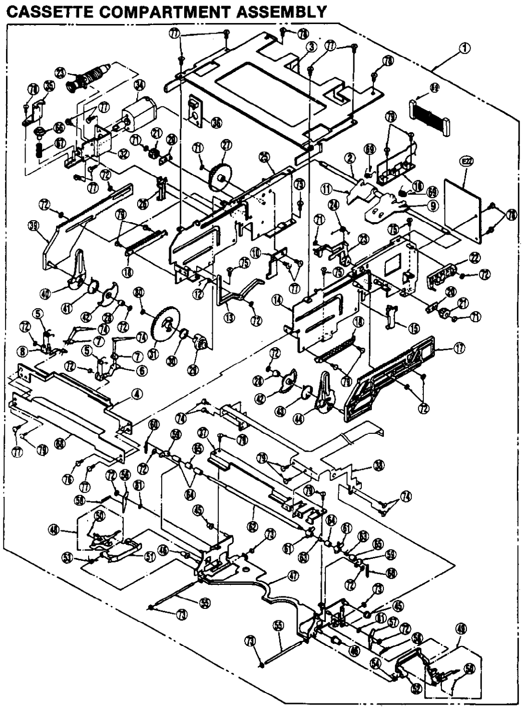

CHASSIS FRAME ASSEMBLY
Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.

Chassis Frame Assembly

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VMP4871	LEFT SIDE FRAME	1	
2	VGQ4011	P.C.BOARD GUIDE RAIL A	2	
3	VYQ1258	ROTARY BRACKET L	1	
4	VGQ4012	P.C.BOARD GUIDE RAIL B	2	
5	VMP4877	REAR FRAME	1	
6	VKA0117	PLASTIC FOOT	4	
7	VMP4878	BOTTOM FRAME	1	
8	VMP4881	SW BRACKET	1	
9	EST15372T	POWER SWITCH	1	FOR AJ-D850P
9	EST15367T	POWER SWITCH	1	FOR AJ-D850E
10	VMZ0580	SW COVER	1	
11	VJF0285	WIRE LOCKING SADDLE	4	
12	VJF1259	EDGE HOLDER	1	
13	VMP4876	FRONT FRAME	1	
14	VJF0004	WIRE SADDLE	3	
15	VMP4873	CENTER FRAME	1	
16	VXA5550	MECHANISM FRAME ASS'Y	1	
17	VGF0715	INSULATION SHEET	1	
18	VMP4874	CENTER SUB FRAME	1	
19	VGQ1543	EDGE GUARD	1	
20	VMP4875	MIDDLE FRAME	1	
21	VYQ1259	ROTARY BRACKET R	1	
22	VMP4872	SIDE FRAME R	1	
23	VJF0384	CLAMPER	2	
25	VMP5264	FPC SHIELD COVER	1	
26	VSC4384	POWER CABLE COVER	1	FOR AJ-D850E
27	VMC1318	FRAME EARTH METAL	1	FOR AJ-D850E
28	VMP5263	SHIELD COVER	1	FOR AJ-D850E
29	VMT0609	GASKET	1	FOR AJ-D850E
30	VMP5285	BOTTOM FRAME ANGLE	4	
31	VGF0714	BARRIER A	1	
32	VMT0873	GASKET (D)	10	
33	VMT0905	GASKET	2	
34	VEE0C19	POWER DC2 CABLE	1	
71	VHD5013	SCREW	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
72	XTN3+6F	SCREW	2	
73	XTV3+6F	SCREW	27	
74	XTV3+6FFR	SCREW	9	
75	XYN3+C6	SCREW	6	
76	XYNV3+K12S	SCREW	4	
E1	VEP80A48A	MOTHER P.C.BOARD	1	
E2	VEP82220A	F1 SERVO P.C.BOARD	1	
E3	VEP86267A	F2 SYSCON P.C.BOARD	1	
E4	VEP83410C	F4 VIDEO OUT P.C.BOARD	1	
E5	VEP83394A	F5 REC PB P.C.BOARD	1	
E6	VEP83409B	F6 VIDEO IN P.C.BOARD	1	
E7	VEP84326A	F7 A PROC P.C.BOARD	1	
E8	VEP84301B	F8 A ADDA P.C.BOARD	1	
E9	VEP84302C	H2 CUE P.C.BOARD	1	
E10	VEP85048A	H3 EQ P.C.BOARD	1	
E12	VEP85151A	BUFFER AMP P.C.BOARD	1	
E13	VEP80991A	AC HEAD IF P.C.BOARD	1	

5.9. Cassette Compartment Assembly



Cassette Compartment Assembly

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VXA6070	CASSETTE COMPARTMENT	1	(M)
2	VMS5865	MAIN SHAFT	1	
3	VMA9849	TOP PLATE	1	
4	VXA5761	FRONT GUIDE 1 ASS'Y	1	
5	VMB3075	M GUIDE SPRING	2	
6	VML3191	M GUIDE RIGHT LEVER	1	
7	VML3192	M FRONT GUIDE	2	
8	VML3190	M GUIDE LEFT LEVER	1	
9	VML3397	CASSETTE PROTECT PLATE	1	
10	VMA9760	L OPENER	1	
12	VMB2926	SPRING	1	
13	VML2A50	BLINDER PANEL OPENER	1	
23	VXL2692	OPENER ANGLE ASS'Y	1	
14	VXA6074	R SIDE PLATE 1 ASS'Y	1	
15	VML3282	SUB RAIL (R)	1	
16	VEK7695	SIDE FLEXIBLE	1	
17	VXA5766	MAIN RACK R ASS'Y	1	
18	VDG1156	WIPER RACK	2	
20	VDB1395	MAIN SHAFT ANGLE	2	
21	VDG1155	INTERLOCK GEAR	2	
22	VML3193	OPENER DRIVE ARM	1	
24	VMB2979	SPRING	1	
25	VXA6072	SIDE PLATE L 1 ASS'Y	1	
26	VML3281	SUB RAIL (L)	1	
27	VDG1254	INTERMEDIATE GEAR	1	
28	VDP1643	WIPER ROLLER	2	
29	VDG1237	CLUTCH GEAR	1	
30	VMB2980	CLUTCH SPRING	1	

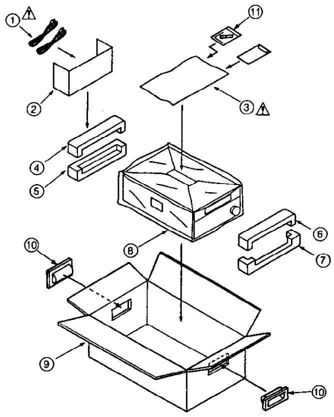
Ref. No.	Part No.	Part Name & Description	Pcs	Remark
31	VDG1236	WORM WHEEL	1	
32	VXA5848	MOTOR ANGLE (A) ASS'Y	1	
33	VXP1797	E.E SLOT IN WORM ASS'Y	1	
34	VXA5597	MOTOR ASS'Y	1	(M)
35	VMA9673	EMARGENCY ANGLE	1	
36	VEK7793	MOTOR P.C.BOARD	1	
37	VMA9668	HOLDER PLATE	1	
38	VEK7715	HOLDER FLEXIBLE ASS'Y	1	
39	VXA6075	MAIN RACK (L) ASS'Y	1	
40	VML2A49	WIPER ARM L	1	
41	VMB2925	WIPER SPRING L	1	
42	VDG1163	WIPER GEAR	2	
43	VMB3013	WIPER SPRING R	1	
44	VML2A52	WIPER ARM R	1	
45	VDP1642	CASSETTE GUIDE ROLLER (2)	2	
46	VDP1641	CASSETTE GUIDE ROLLER (1)	2	
47	VXA5757	CASSETTE HOLDER 1 ASS'Y	1	
48	VXA5758	ROD L	1	
49	VXA5759	ROD R	1	
50	VMB3064	SLIDE SPRING	2	
51	VML3249	SIDE GUIDE L	1	
52	VML3250	SIDE GUIDE R	1	
53	VMB3061	SLIDE GUIDE SPRING L	1	
54	VMB3062	SLIDE GUIDE SPRING R	1	
55	VMS6108	KICK OFF ROD SHAFT	2	
56	VML2A54	KICK OFF ARM L	1	
57	VML2A55	KICK OFF ARM R	1	
58	VMB2928	KICK OFF SPRING	2	
59	VML2A53	CASSETTE HOLDER ARM	2	
60	VMB2927	CASSETTE HOLDER SPRING	2	
61	VMX2833	ML DETECTION ROLLER	2	
62	VMS5882	CASSETTE HOLDER SHAFT	1	
63	VMB3253	M-L DETECTION SPRING	2	
64	VMX2559	CASSETTE PRESSURE ROLLER(2)	3	
65	VMX2524	CASSETTE PRESSURE ROLLER(1)	1	
66	VDG1246	EMARGENCY GEAR	1	
67	VMB3109	EMARGENCY SPRING	1	
68	VMZ2661	FRONT GUIDE COVER	1	
71	VMX0653	CUT WASHER	4	
72	VMX0967	CUT WASHER	14	
73	VMX1061	WASHER	4	
74	XQN16+A2	SCREW	8	
75	XQN2+CF3	SCREW	4	
76	XQN2+A2	SCREW	2	
77	XYN2+C3	SCREW	12	
78	XQN2+A3	SCREW	5	
79	LMHD16064	SCREW	10	
80	XWGV2Y4G	WASHER	2	
81	XWGV2Z5G	WASHER	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
E28	**VEP80856A**	**CARRIGE P.C.BOARD**	**1**	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.10. Packing Parts Assembly

PACKING PARTS ASSEMBLY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Packing Parts Assembly

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
1	VJA0488	POWER CORD	1	FOR AJ-D850P
1	VJA0774	POWER CORD	1	FOR AJ-D850E
1	VJA0775	POWER CORD	1	FOR AJ-D850E
2	VPN4305	ACCESSORY PAD	1	
3	VQT7281	OPERATING INSTRUCTIONS	1	FOR AJ-D850P
3	VQT7282	OPERATING INSTRUCTIONS	1	FOR AJ-D850E
4	VPN4302	CUSHION UL	1	
5	VPN4304	CUSHION LL	1	
6	VPN4606	CUSHION UR	1	
7	VPN4607	CUSHION LR	1	
8	VPF0277	POLYETHYLENE BAG	1	FOR AJ-D850P
8	VPF0277	POLYETHYLENE BAG	1	FOR AJ-D850E
9	VPG9736	PACKING CASE	1	FOR AJ-D850P
9	VPG9737	PACKING CASE	1	FOR AJ-D850E
10	VPF0149	HANDLE	2	
11	VXF0159	EMARGENCY EJECT	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.11. Electrical Parts List

Electrical Parts List

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
***E1**	**VEP80A48A**	**MOTHER P.C.BOARD**	**1**	**(RTL)**
***E2**	**VEP82220A**	**F1 SERVO P.C.BOARD**	**1**	**(RTL)FOR AJ-D850P**
***E2**	**VEP82220B**	**F1 SERVO P.C.BOARD**	**1**	**(RTL)FOR AJ-D850E**
***E3**	**VEP86267A**	**F2 SYSCON P.C.BOARD**	**1**	**(RTL)FOR AJ-D850P**
***E3**	**VEP86267B**	**F1 SYSCON P.C.BOARD**	**1**	**(RTL)FOR AJ-D850E**
***E4**	**VEP83410C**	**F4 VIDEO OUT P.C.BOARD**	**1**	**(RTL)FOR AJ-D850P**
***E4**	**VEP83410B**	**F4 VIDEO OUT P.C.BOARD**	**1**	**(RTL)FOR AJ-D850E**
***E5**	**VEP83394A**	**F5 REC PB P.C.BOARD**	**1**	**(RTL)FOR AJ-D850P**
*****	**VEP83405A**	**V BLK SUB P.C.BOARD**	**1**	**(RTL)FOR VEP83394A**
***E5**	**VEP83394B**	**F5 REC PB P.C.BOARD**	**1**	**(RTL)FOR AJ-D850E**
*****	**VEP83405B**	**V BLK SUB P.C.BOARD**	**1**	**(RTL)FOR VEP83394B**

Ref. No.	Part No.	Part Name & Description	Pcs	Remark
***E6**	**VEP83409B**	**F6 VIDEO IN P.C.BOARD**	**1**	**(RTL)FOR AJ-D850P**
***E6**	**VEP83449A**	**F6 VIDEO IN P.C.BOARD**	**1**	**(RTL)FOR AJ-D850E**
***E7**	**VEP84326A**	**F7 A PROCESS P.C.BOARD**	**1**	**(RTL)**
***E8**	**VEP84301B**	**F8 A AD/DA P.C.BOARD**	**1**	**(RTL)**
***E9**	**VEP84302C**	**H2 CUE P.C.BOARD**	**1**	**(RTL)**
***E10**	**VEP85048A**	**H3 EQ P.C.BOARD**	**1**	**(RTL)**
***E11**	**VEP85049A**	**H4 RF AMP P.C.BOARD**	**1**	**(RTL)**
***E12**	**VEP85151A**	**HEAD BUFFER P.C.BOARD**	**1**	**(RTL)**
***E13**	**VEP80991A**	**AC HEAD I/F P.C.BOARD**	**1**	**(RTL)**
***E14**	**VEP83224A**	**V/S JACK P.C.BOARD**	**1**	**(RTL)**
***E15**	**VEP81183A**	**POWER 1 P.C.BOARD**	**1**	**(RTL)**
***E16**	**VEP81184B**	**POWER 2 P.C.BOARD**	**1**	**(RTL)**
***E17**	**VEP80A58A**	**POWER INT P.C.BOARD**	**1**	**(RTL)**
***E18**	**VEP84183A**	**A JACK P.C.BOARD**	**1**	**(RTL)**
***E19**	**VEP84187A**	**AES/EBU P.C.BOARD**	**1**	**(RTL)**
***E20**	**VEP80A76A**	**UP FRONT 1 P.C.BOARD**	**1**	**(RTL)**
***E21**	**VEP80852A**	**UP FRONT 2 P.C.BOARD**	**1**	**(RTL)**
***E22**	**VEP86263B**	**FRONT CPU P.C.BOARD**	**1**	**(RTL)**
***E23**	**VEP86148A**	**FRONT CPU SUB P.C.BOARD**	**1**	**(RTL)**
***E24**	**VEP80A49B**	**FRONT SW P.C.BOARD**	**1**	**(RTL)**
***E25**	**VEP80963C**	**FRONT VR 1 P.C.BOARD**	**1**	**(RTL)**
***E26**	**VEP80964C**	**FRONT VR 2 P.C.BOARD**	**1**	**(RTL)**
***E27**	**VEP82216B**	**MECHA I/F P.C.BOARD**	**1**	**(RTL)**
***E28**	**VEP80856A**	**CARRIGE P.C.BOARD**	**1**	**(RTL)**

Ref. No.	Part No.	Part Name & Description	Pcs	Remark

5.12. *VEP80A48A*

5.13. *VEP82220A*

5.14. *VEP82220B*

5.15. *VEP86267A*

5.16. *VEP86267B*

5.17. *VEP83410C*

5.18. *VEP83410B*

5.19. *VEP83394A*

5.20. *VEP83405A*

5.21. *VEP83394B*

5.22. *VEP83405B*

5.23. *VEP83409B*

5.24. *VEP83449A*

5.25. *VEP84326A*

5.26. *VEP84301B*

5.27. *VEP84302C*

5.28. *VEP85048A*

5.29. *VEP85049A*

5.30. *VEP85151A*

5.31. *VEP80991A*

5.32. *VEP83224A*

5.33. *VEP81183A*

5.34. *VEP81184B*

5.35. *VEP80A58A*

5.36. *VEP84183A*

5.37. *VEP84187A*

5.38. *VEP80A76A*

5.39. *VEP80852A*

5.40. *VEP86263B*

5.41. *VEP86148A*

5.42. *VEP80A49B*

5.43. *VEP80963C*

5.44. *VEP80964C*

5.45. *VEP82216B*

5.46. *VEP80856A*

6. Block Diagrams

6.1. OVERALL BLOCK DIAGRAM

BLK1

6.2. VIDEO OVERALL BLOCK DIAGRAM

BLK-2

6.3. AUDIO OVERALL BLOCK DIAGRAM

BLK-3

6.4. RF OVERALL BLOCK DIAGRAM

BLK-4

6.5. F1 SERVO BLOCK DIAGRAM

BLK-5

6.6. F2 SYSCON BLOCK DIAGRAM

BLK-6

6.7. F4 V OUT (1/2) BLOCK DIAGRAM

BLK-7

6.8. F4 V OUT (2/2) BLOCK DIAGRAM

BLK-8

6.9. F5 REC PB BLOCK DIAGRAM BLK-9

6.10. F6 V IN BLOCK DIAGRAM (NTSC) BLK-10

6.11. F6 V IN BLOCK DIAGRAM (PAL) BLK-11

6.12. F7 A PROC BLOCK DIAGRAM BLK-12

6.13. F8 A ADDA 1 BLOCK DIAGRAM BLK-13

6.14. H2 CUE BLOCK DIAGRAM BLK-14

6.15. H3 EQ BLOCK DIAGRAM BLK-15

6.16. H4 RF AMP BLOCK DIAGRAM BLK-16

6.17. HEAD BUFFER BLOCK DIAGRAM BLK-17

7. Schematic Diagrams

7.1. SERVO VEP82220

7.2. SYSCON VEP86267

7.3. V OUT VEP83410

7.4. REC PB VEP83394

7.5. V BLK SUB VEP83405

7.6. V IN FOR NTSC VEP83409

7.7. V IN FOR PAL VEP83449

7.8. A PROC

VEP84326

7.9. A ADDA

VEP84301

7.10. CUE

VEP84302

7.11. EQ

VEP85048

7.12. RF AMP

VEP85049

7.13. HEAD BUFF

VEP85151

7.14. MOTHER

VEP80A48

7.15. V/S JACK

VEP83224

7.16. POWER 1

VEP81183

7.17. POWER 2

VEP81184

7.18. MECHA IF

VEP82216

7.19. A JACK

VEP84183

7.20. FRONT CPU

VEP86263

7.21. FRONT CPU SUB

VEP86148

7.22. FRONT SW

VEP80A49

7.23. FRONT VR 1

VEP80963

7.24. FRONT VR 2

VEP80964

7.25. POWER CONNECT

VEP80A58

7.26. CARRIGE

VEP80856

7.27. AES/EBU

VEP84157

7.28. UP FRONT 2

VEP80852

7.29. UP FRONT 1

VEP80A76

8. Circuit Board Diagrams

8.1. CUE P. C. BOARD

VEP84302

8.2. SERVO P. C. BOARD

VEP82220

8.3. SYSCON P. C. BOARD

VEP86267

8.4. V OUT P. C. BOARD

VEP83410

8.5. REC PB P. C. BOARD

VEP83394

8.6. VBLK SUB P. C. BOARD

VEP83405

8.7. V IN P. C. BOARD FOR NTSC

VEP83409

8.8. V IN P. C. BOARD FOR PAL

VEP83449

8.9. A PROC P. C. BOARD

VEP84326

8.10. A ADDA P. C. BOARD

VEP84301

8.11. EQ P. C. BOARD

VEP85048

8.12. RF AMP P. C. BOARD

VEP85049

8.13. MOTHER P. C. BOARD

VEP80A48

8.14. HEAD BUFF P. C. BOARD

VEP85151

8.15. MECHA IF P. C. BOARD

VEP82216

8.16. FRONT SW P. C. BOARD

VEP80A49

8.17. FRONT CPU P. C. BOARD

VEP86263

8.18. UP FRONT 1 P. C. BOARD

VEP80A76

8.19. FRONT CPU SUB P. C. BOARD

VEP86148

8.20. A JACK P. C. BOARD

VEP84183

8.21. POWER 1 P. C. BOARD

VEP81183

8.22. POWER 2 P. C. BOARD

VEP81184

8.23. FRONT VR1 P. C. BOARD

VEP80963

8.24. FRONT VR2 P. C. BOARD

VEP80964

9. PDF LINK ENGLISH

9.1. Specifications

9.2. SAFETY PRECAUTIONS

9.3. Operating Instructions

AJ-D850P
AJ-D850E

9.4. Service Information

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9.10.16. FRONT SW P. C. BOARD

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9.10.17. FRONT CPU P. C. BOARD

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VEP81184

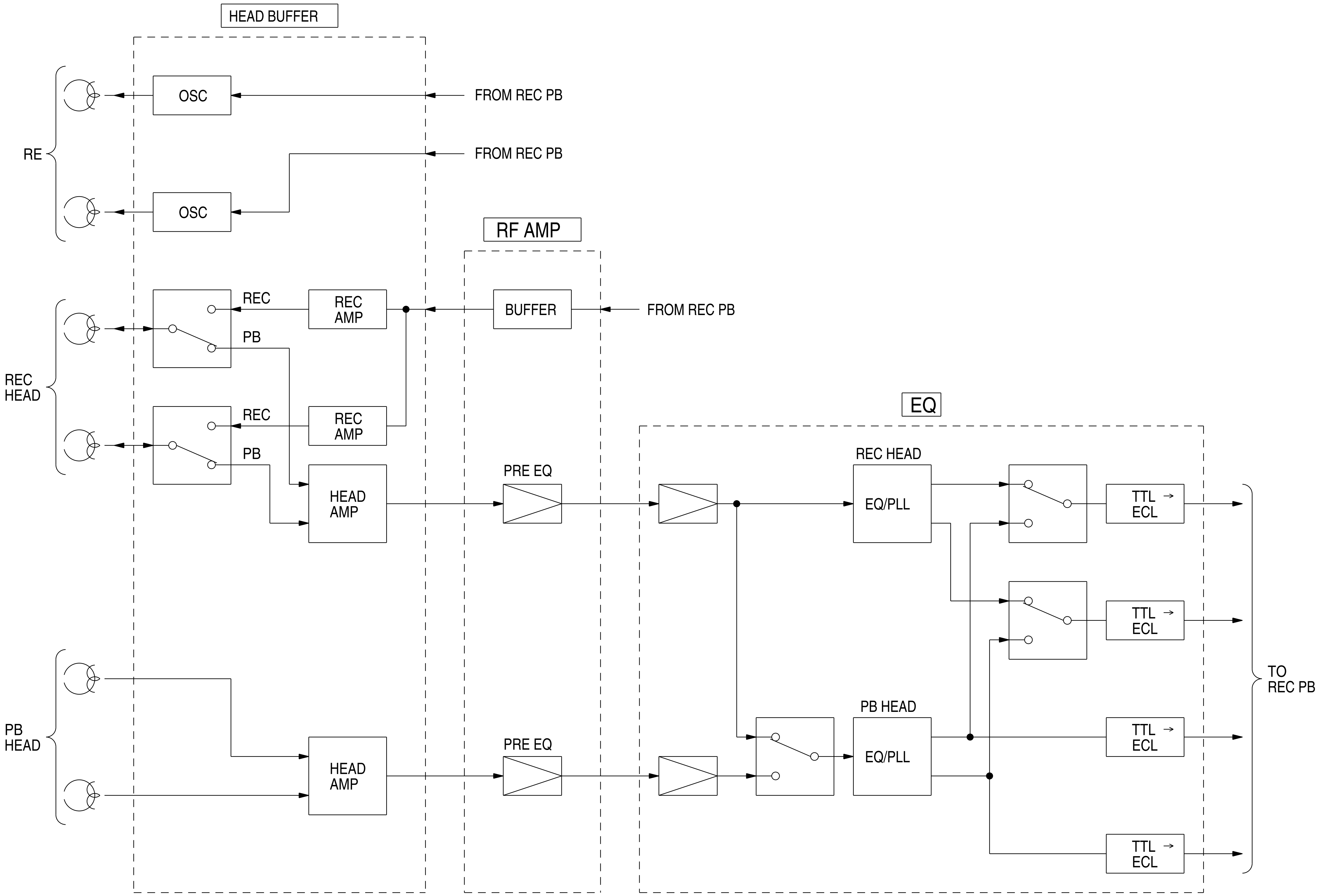
9.10.23. FRONT VR1 P. C. BOARD

VEP80963

9.10.24. FRONT VR2 P. C. BOARD

VEP80964

RF OVERALL BLOCK DIAGRAM


HEAD BUFFER
RE
OSC
FROM REC PB
OSC
FROM REC PB
RF AMP
REC
REC AMP
BUFFER
FROM REC PB
PB
REC HEAD
REC
REC AMP
PB
HEAD AMP
PRE EQ
EQ
REC HEAD
EQ/PLL
TTL → ECL
TTL → ECL
PB HEAD
HEAD AMP
PRE EQ
PB HEAD
EQ/PLL
TTL → ECL
TTL → ECL
TO REC PB

SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

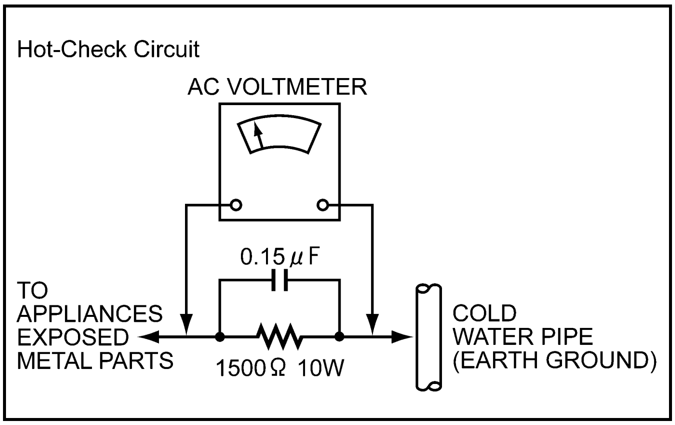


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.
   Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10W resistor, in parallel with a 1.5μF capacitor, between each exposed metallic part on the set an a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. in case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor “chip” components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

LEAKAGE CURRENT COLD CHECK

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as “anti-static” can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (most replacement ES devices are packaged with leads electrically shorted together by conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise hamless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

X-RADIATION

WARNING

1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electric type) reading should indicate 2.5kV, ±0.15kV. if the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

SECTION 2

SERVICE INFORMATION

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1. ERROR RATE CONFIRMATION PROCEDURE

1. Function of Front Switch

1-1. Front Panel Bottom side

DIP SW	ON	OFF
SW1-1	•SERVICE mode (SERVICE MENU display) •SW1-2 to 1-4 Valid	•NORMAL mode (SET UP MENU display) •SW1-2 to 1-4 Invalid
SW1-2	Error Rate Display Mode: SLOW	Error Rate Display Mode: FAST
SW1-3	Force R/P Head Playback	Force PB Head Playback
SW1-4	VITABI Decode ON	VITABI Decode OFF

***NOTE:** In case of DIP SW1-1 is ON, SW1-2,1-3 and 1-4 becomes valid.

1-2. Front Panel Bottom section

	4F	2F
CF SW	Error Rate is display	Error Rate is not display

	ON	OFF
SYNCHRONIZE SW	Conceal OFF	Conceal ON

***NOTE:** In case of DIP SW1-1 is ON, above switches change the function as indicated as above table.

1-3. TC MODE SW (TC/CTL switch and TC/UB switch on the Front Panel)

Inner and Outer correction are set by combination of TC/CTL and TC/UB switches setting.

MODE	INNER Correction	OUTER Correction
CTL	OFF	OFF
TC	ON	OFF
UB	ON	ON

***NOTE:** In case of DIP SW1-1 is ON, above switches change the function as indicated as above table.

1-4. Correspond to Service Menu of Front Switches.

The Menu function in the RF ADJUST menu and Front switches are correspond as follows.

DIP SW1 (Front Panel Bottom side)

DIP SW	MENU No.	Item
SW1-2	B28	ERROR MODE
SW1-3	B27	PB MODE
SW1-4	B26	VITERBI MODE

(Front Panel Bottom section)

	MENU No.	Item
SYNCHRONIZE SW	B25	CONCEAL MODE

TC MODE SW (TC/CTL switch and TC/UB switch on the Front Panel)

MODE	MENU No.	Item
CTL, TC, UB	B24	ECC MODE

NOTE: Setting of Service Menu have priority to setting of Front Switches, when the Service Menu is open.

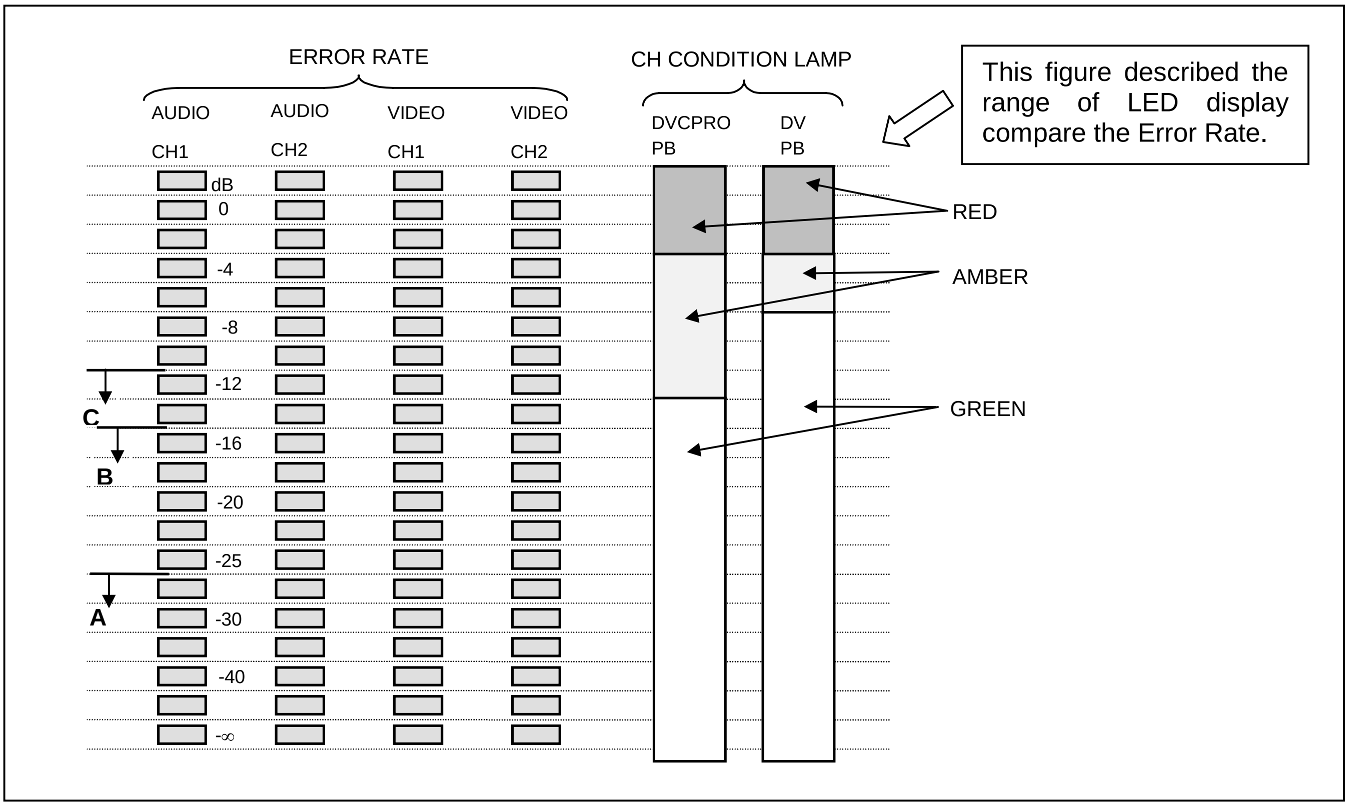
2. Condition of Error Rate display

①.DIP SW1-1 : **ON**
②.CF SW : **4F**

⇨ Audio Level Meter on the Front Panel changed to Error Rate display mode.

The Level Meter indicated as level of Error Rate, Audio CH1(Lch), Audio CH2(Rch), Video CH1(Lch) and Video CH2(Rch).
The Video and Audio Error Rate displayed on Level Meter as indicated as below figure.(front view at meter).

3. Specification of Error Rate



This figure described the range of LED display compare the Error Rate.

When confirm the Error Rate, please refer to specification of Error Rate as indicated as below, it level follow the menu setting as indicated as below table.

Menu setting

Item of the MENU	DVCPRO	DV
B28 : ERROR MODE	FAST	FAST
B27 : PB MODE	PB H	RP H
B26 : VITERBI MODE	ON	ON
B25 : CONCEAL MODE	ON	ON
B24 : ECC MODE	AL OFF	AL OFF

NOTE: Left side table described setting by Service Menu.
Those setting can be set by Front SW as described as previous page.

Specification of Error Rate

	VTR mode	Specification of Error Rate
DVCPRO (PB)	DVCPRO (PB Head) alignment tape playback	Under the "A" position at level meter
DV (R/P)	DV (RP Head) Alignment tape playback	Under the "B" position at level meter
DVCPRO (Confi)	DVCPRO confidence playback (REC mode)	Under the "C" position at level meter

2. Service Menu Information

< Operation Procedure >

(1) The “REMOTE/LOCAL” switch set to “LOCAL” on the front panel.
(2) Set the Dip SW 1-1 to ON position on the bottom side of front panel.
(3) Press the MENU button on the front panel, then appeared Main menu of Service menu on the screen as indicated as below.

```
          SERVICE-MENU
            No. A00

 *  A00  :  SERVO ADJUST
    B00  :  EQ ADJUST
    C00  :  RF ADJUST
    D00  :  VIDEO ADJUST
    E00  :  AUDIO ADJUST
    H00  :  OTHER ADJUST
    END
```

MAIN Menu

(4) Move the star mark “*” by Search Dial to select the each Adjustment menu.
(5) Press the SET button, then open the Adjustment Menu follow the selected item (A00 to H00) on the Main menu.
(6) Each Adjustment item are selected by Search Dial.
(7) For change the value or setting, holding the Search button while rotate the Search Dial.(same way of SET UP menu).

< KEY function for Service Menu >

[MENU button] :	①. Move to Main menu on Service menu from SET UP menu.
	②. Move to Main menu from ADJUST menu on the Service menu
	③. Move to SET UP menu from Main menu on Service menu.
[SET button] :	①. Move to ADJUST menu from Main menu on Service menu.
[SERACH DIAL] :	①. Move the cursor “*” for select the each item.
	②. Change the numerical value or setting of each item on ADJUST menu. (Increase adjustment value by turn Search Dial to clockwise and decrease adjustment value by turn Search Dial to counter-clockwise.)
[SEARCH button]	①. For change the numerical value or setting value, holding this button while rotate the Search Dial.

< Store the adjustment and setting value to the memory >

When menu is escape from Adjustment menu to Main menu by press MENU button, each data write to the memory.

The contents of each “Adjustment menu” which are described on behind page.

Press the MENU button on the Main menu condition, then escape from Service menu mode.

A00:SERVO ADJUST

No.	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT	REMARK
A01	PG SHIFTER	0 ~ **1649** ~ 4095 0 ~ **1649** ~ 4095	(RISE display) PG SHIFTER AUTO ADJ (FALL display).	Elec. Adj
A02	T TORQUE	-128 ~ **0** ~ +127 Initial:0	Correct the offset value of T REEL MOTER DRIVE	Elec. Adj
A03	S TORQUE	-128 ~ **0** ~ +127 Initial:0	Correct the offset value of S REEL MOTER DRIVE	Elec. Adj
A04	PB GAIN P	-128 ~ **1** ~ +127	LISTA SENSITIVITY Adj. (PB HEAD)	LISTA
A05	PB LINEAR P	0 1 ON	LISTA LINEARITY Adj. (PB HEAD)	LISTA
A06	RP GAIN P	-128 ~ **1** ~ +127	LISTA SENSITIVITY Adj. (R/P HEAD)	LISTA
A07	RP LINEAR P	0 1 ON	LISTA LINEARITY Adj. (R/P HEAD)	LISTA
A08	RP GAIN	-128 ~ **1** ~ +127	LISTA CONSUMER DV COMPATIBILITY CONFIRMATION	LISTA
A09	RP LINEAR	0 1 ON	LISTA CONSUMER DV LINEARITY Adj.	LISTA
A10	MOTOR CHECK	0 OFF 1 CAP 2 DRUM 3 T REEL 4 S REEL		* NOT USED

B00:EQ ADJUST

Note: The mark “●” indicated as common adjustment item for DVCPRO and DV.

NO	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT	REMARK
B01	PB PLL PHASE	-128 ~ **40** ~ +127	PB PLL PHASE Adj. ●	Elec. Adj
B02	PB PLL SLICE	-128 ~ **-70** ~ +127	PB PLL SLICE LEVEL Adj. ●	Elec. Adj
B03	PB AEQ	-128 ~ +**75** ~ +127	PB AUTO EQ Adj. ●	Elec. Adj
B04	PB GAIN L	-128 ~ **+30** ~ +127	PB Lch EQ GAIN Adj. ●	Elec. Adj
B05	PB PHASE L	-128 ~ **-55** ~ +127	PB Lch EQ PHASE Adj. ●	Elec. Adj
B06	PB GAIN R	-128 ~ **+30** ~ +127	PB Rch EQ GAIN Adj. ●	Elec. Adj
B07	PB PHASE R	-128 ~ **-55** ~ +127	PB Rch EQ PHASE Adj. ●	Elec. Adj
B08	RP PLL PHASE	-128 ~ **+50** ~ +127	RP PLL PHASE Adj.	Elec. Adj
B09	RP PLL SLICE	-128 ~ **-70** ~ +127	RP PLL SLICE LEVEL Adj.	Elec. Adj
B10	RP AEQ	-128 ~ **+75** ~ +127	RP AUTO EQ Adj.	Elec. Adj
B11	RP GAIN L	-128 ~ **+30** ~ +127	RP Lch EQ GAIN Adj.	Elec. Adj
B12	RP PHASE L	-128 ~ **-55** ~ +127	RP Lch EQ PHASE Adj.	Elec. Adj
B13	RP GAIN R	-128 ~ **+30** ~ +127	RP Rch EQ GAIN Adj.	Elec. Adj
B14	RP PHASE R	-128 ~ **-55** ~ +127	RP Rch EQ PHASE Adj.	Elec. Adj
B15	VTB PHASE 1	-128 +127	VITABI A/D CLOCK PHASE Adj. (LSB)	
B16	VTB PHASE 2	-128 +127	VITABI A/D CLOCK PHASE Adj.	
B17	VTB PHASE 3	-128 +127	VITABI A/D CLOCK PHASE Adj. (MSB)	
B18	VTB PHS FINE	-128 ~ **-1** ~ +127	VITABI A/D CLOCK PHASE ADJ. (FINE Adj.)	
B19	PB MAIN DL	-128 ~ **-40** ~ +127	PB EQ DELAY LINE Adj. ●	Elec. Adj
B20	RP MAIN DL	-128 ~ **-40** ~ +127	RP EQ DELAY LINE Adj.	Elec. Adj
B21	PB PLL VCO	-128 ~ **+66** ~ +127	PB PLL VCO Adj.	
B22	RP PLL VCO	-128 ~ **+66** ~ +127	RP PLL VCO Adj.	
B23	VTB GAIN	-31 ~ **-15** ~ +32	VITABI A/D INPUT LEVEL Adj. ●	Elec. Adj
B24	ECC MODE	0 ALL ON 1 OT OFF 2 AL OFF	ERROR CORRECTION INNER ON/OUTER ON ERROR CORRECTION INNER ON/OUTER OFF ERROR CORRECTION INNER OFF/OUTER OFF	
B25	CONCEAL MODE	0 ON 1 OFF	ERROR CONCEALMENT ON ERROR CONCEALEMENT OFF *This CONCEAL MODE function is only effective, when the above ECC MODE set to “ALL ON”.	

B26	VITABI MODE	0 AUTO 1 ON 2 OFF	VITABI ON VITABI ON VITABI OFF	
B27	PB MODE	0 PB H 1 RP H	FORCED PB HEAD PLAYBACK FORCED RP HEAD PLAYBACK	
B28	ERROR MODE	0 FAST 1 SLOW	ERROR DISPLAY MODE “FAST” ERROR DISPLAY MODE “SLOW”	
B29	EQ AUTO ADJ	0 STOP 1 START	 PB EQUALIZER AUTO Adj.	*NOT USED
B30	DEFAUT	0 LOAD 1 SAVE	LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE	

Note: The items (No. B24 to B28), which operated only active on the EQ ADJUST mode. And these function have priority over setting of DIP SW and Front SW as indicated as below.

1. Function of Front Switch
   Front Rear DIP SW

DIPSW	ON	OFF
SW1	•Service MENU SW2~4 Valid	•SET UPMENU •SW2~4 Invalid
SW2	Error Rate Display: SLOW	Error Rate Display: FAST
SW3	Force R/P Head Playback	Force PB Head Playback
SW4	Vitabi Decode ON	Vitabi Decode OFF

Front Bottom DISPLAY

	4F	2F
CF	Error Rate is displayed	Error Rate is not displayed.

	ON	OFF
SYNCHRONIZE	Conceal OFF	Conceal ON

Front TC MODE SW

	INNER Correction	OUTER Correction
CTL	OFF	OFF
TC	ON	OFF
UB	ON	ON

[How to LOAD or SAVE the adjustment value]

NOTE: This item (B30) is only active on the tape pass condition.

Press the SET button , the appear the message as indicated as below.

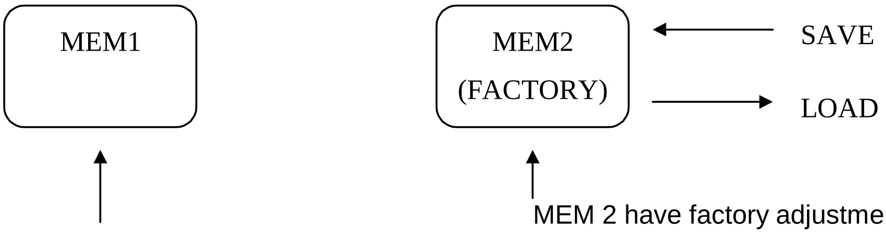
*SAVE

LOAD

END

Set the cursor “*” to SAVE or LOAD and press the SET button, then execute the program.

NOTE: 1. The VTR have two memory area for the adjustment value as indicated as below.



MEM 2 have factory adjustment value.

MEM 1 is always renewed follow the adjustment value on the RF and EQ adjustment menu.

2. We recommended the SAVE function does not use or the market, because the renewed adjustment value is stored to MEM 1 automatically.

C00:RF ADJUST

NO	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT	REMARK
C01	REC CURR L	-128 ~ **0** ~ +127	SETTING OF REC CURR (RP Lch)	Elec. Adj
C02	REC FREQ L	-128 ~ **0** ~ +127	SETTING OF REC FREQ (RP Lch)	Elec. Adj
C03	REC CURR R	-128 ~ **0** ~ +127	SETTING OF REC CURR (RP Rch)	Elec. Adj
C04	REC FREQ R	-128 ~ **0** ~ +127	SETTING OF REC FREQ (RP Rch)	Elec. Adj
C05	RE CURR L	-128 ~ **0** ~ +127	SETTING OF ERASE CURR (RE Lch)	Elec. Adj
C06	RE CURR R	-128 ~ **0** ~ +127	SETTING OF ERASE CURR (RE Rch)	Elec. Adj
C07	RP PHASE L	-128 ~ **0** ~ +127	RP Lch PLAYBACK PHASE CORRECTION	
C08	RP PHASE R	-128 ~ **0** ~ +127	RP Rch PLAYBACK PHASE CORRECTION	
C09	RP MAG L	-128 ~ **0** ~ +127	RP Lch PLAYBACK OUTPUT GAIN CORRECTION	
C10	RP MAG R	-128 ~ **0** ~ +127	RP Rch PLAYBACK OUTPUT GAIN CORRECTION	
C11	PB PHASE L	-128 ~ **0** ~ +127	PB Lch PLAYBACK PHASE CORRECTION	
C12	PB PHASE R	-128 ~ **0** ~ +127	PB Rch PLAYBACK PHASE CORRECTION	
C13	PB MAG L	-128 ~ **0** ~ +127	PB Lch PLAYBACK OUTPUT GAIN CORRECTION	
C14	PB MAG R	-128 ~ **0** ~ +127	PB Rch PLAYBACK OUTPUT GAIN CORRECTION	
C15	REC SIG	0 NORMAL 1 CW		* NOT USED
C16	ECC MODE	0 ALL ON 1 OT OFF 2 AL OFF		
C17	CONCEAL MODE	0 ON 1 OFF		
C18	VITERBI MODE	0 AUTO 1 ON 2 OFF		
C19	PB MODE	0 PB H 1 RP H		
C20	ERROR MODE	0 FAST 1 SLOW	ERROR RATE INDICATION FAST ERROR RATE INDICATION SLOW	
C21	TRACKING MOD	0 ATF 1 CTL	SELECTION OF TRACKING CONTROL MODE *This function is only active on the service Menu mode.	
C22	TRACKING VAL	-128 ~ **0** ~ +127 Initial: 0	" IN CASE OF SELECT THE CTL MODE ON ABOVE ITEM C20, TRACKING VALUE IS ADJUSTABLE" *TRACKING VALUE RANGE DATA 0 - 116 : RELATIVE TO 1 TRACK THEREFORE 0 TO 127 IS RELATIVE TO JUST OVER 18 um	
C23	REC OPTIMAIZ	0 STOP 1 START		* NOT USED
C24	DEFAUT	0 LOAD 1 SAVE	LOAD THE FACTORY ADJUSTMENT VALUE SAVE THE ADJUSTMENT VALUE	

D00:VIDEO ADJUST

NO	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT	REMARK
D01	VIDEO BLANK	0 NORMAL 1 OFF	NORMAL : The video signal is blanked at video edge portion for protect the overshoot. OFF : Release the blanking function.	ELEC. ADJ.
D02	V IN PLL	0 OFF 1 ON		
D03	VIDEO MUTE	0 NORMAL 1 MUTE		
D04	SELF DUB GEN	0 OFF 1 3RD 2 10TH		* NOT USED
D05	DUBBING MODE	0 FREEZE 1 REPEAT		* NOT USED
D06	EE TEST MODE	0 NORMAL 1 DCI RT		
D07	HEAD SELECT	0 PB. REC 1 PB 2 REC. PB 3 REC	PRIOR TO PB HEAD FORCED PB HEAD PRIOR TO REC HEAD FORCED REC HEAD	
D08	V SETUP =NTSC ONLY=	0 OFF 1 ON	VALID / INVALID SELECTION FOR SETUP MENU 613 : VIN SETUP AND 614 : VOUT SETUP 0 : SETUP MENU 613/614 NO DISPLAY 1 : SETUP MENU 613/614 DISPLAY	
D10	CMPNT HUE =NTSC ONLY=	0 OFF 1 ON	VALID / INVALID SELECTION FOR SETUP MENU 615 : CMPNT HUE 0 : SETUP MENU 615 NO DISPLAY 1 : SETUP MENU 615 DISPLAY	
D11	CMPNT SET UP =NTSC ONLY=	0 OFF 1 ON	VALID / INVALID SELECTION FOR SETUP MENU 616 : CMPNT SET UP 0 : SETUP MENU 616 NO DISPLAY 1 : SETUP MENU 616 DISPLAY	
D13	TELETEXT INI =NTSC ONLY=	0 MOJI 1 NABTS	SELECT DEFALUT FACTORY (DEFALUT) VALUE OF IIEM 802:TELETEXT SEL ON SET UP MENU. 0 : MOJI (FOR DOMESTIC) 0 : NABTS (FOR OVERSEAS)	

E00:AUDIO ADJUST

NO.	ITEM	SETTING VALUE	CONTENTS OF SETTING and ADJUSTMENT	REMARK
E01	MASTER REF	0 FS-20 1 FS-18 2 FS-12	Select the position of “ Reference level marker “ on the Audio level Meter (CH1, CH2, CUE). 0: Set to -20dB position (For NTSC) 1: Set to -18dB position (For PAL) 2: Set to -12dB Position	
E05	REF LEVEL2	0 0dB 1 -3dB	VALID / INVALID SELECTION IN/OUT REFERENCE LEVEL FOR SET UP MENU. 0: VALID SELECTION -20 / 0 / +4dB 1: ONLY -3dB	
E06	A VCO ADJ	0 NORMAL 1 48KHz 2 44KHz 3 32KHz	SELECT THE ADJUSTMENT MODE OF AUDIO VCO ADJUSTMENT MODE.	
E07	MIC IN LEV	0 DIS 1 ENA	VALID / INVALID SELECTION -60dB FOR SET UP MENU. 700 : CH1 IN LV AND 701 : CH2 IN LV 0: VALID SELECTION +4dB / 0 / -20dB 1: VALID SELECTION +4dB / 0 / -20dB / -60dB	

H00:OTHER ADJUST

H01	STILL LIMIT	0 2min 1 1min	SELECTED UPPER LIMITED VALUE OF ITEM 400:STILL TIMER ON SET UP MENU. 0: 2min 1: 6min	

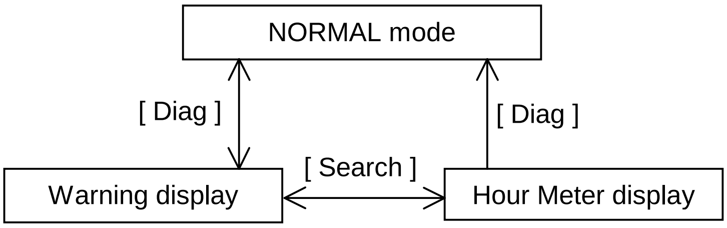
3. HOW TO RESET THE HOUR METER

(1) Set the DIP SW 1-1 to OFF (Normal mode) position on the front panel bottom side.
(2) Set the Dip SW 501-1 to ON and Dip SW 501-2 to OFF position on the SYSCON P.C.B.
(3) Press “DIAG” button on the front panel, then appeared Warning Message on the screen.
NOTE: Normally message of “NO WARNING” appeared on the screen.
(4) Press “SEARCH” button on the front panel, then appeared HOUR METER information on the screen as indicated as below.

```
DIAG-MENU     HOUR METER

*H00 : OPERATION          200H
  H01 : DRUM RUN            50H
  H02 : TAPE RUN            30H
  H03 : THERADING          100H
  H11 : DRUM RUN r          50H
  H12 : TAPE RUN r          30H
  H13 : THERADING r        100H
```

[Display mode]



(5) Set the cursor to mark “r” indicated item (item No.11,12 or 13) and press the “RESET” button on the front panel, then appeared message on the screen as indicated as below.

```
HOURS METER INIT SET

   DRUM RUN r OK?
   YES <PLAY> NO <STOP>
```

***** When press the “PLAY” button, then execute the reset function.
When press the “STOP” button, then cancel the reset command.

4. HOW TO CONFIRM THE SOFTWARE VERSION

1. Turn on the power.
2. Press the EJECT button.
3. Press the PLAY and STOP button simultaneously, then displayed the soft version on the counter display of the front panel.

   <example>   FRONT n 1.00 - 01 - 1.00

4. Press the PLAY and STOP button repeatedly, change the display of all soft version in order as indicated as below.

   SYSCON → SERVO → A/V → SBC 1 → SBC 2 →I/F → FRONT

ROM location indicated as below table

Name	Reference number and Board
SYSCON	IC2 (SYSCON Board)
SERVO	IC235 (SERVO Board)
A/V	IC702 (A/V Board)
SBC 1	IC870 (REC PB Board)
SBC 2	IC910 (REC PB Board)
I/F	IC503 (SYSCON Board)
FRONT	IC2 (FRONT CPU Board)

5. Replacement Procedure of the P. C. Board

Please refer to below table, It indicated as which board is necessary adjustment after board exchanged. And perform the adjustment follow the adjustment procedure on this manual.

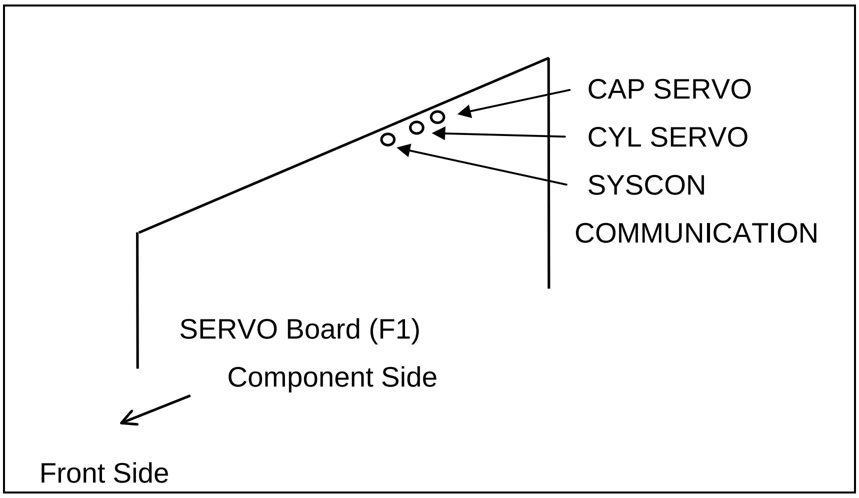
	Board	Adj.		Board	Adj.		Board	Adj.
F1	SERVO	○	F5	REC PB	○	H2	CUE	○
F2	SYSCON	○	F6	V IN	○	H3	EQ	○
F3	SIF(Option)	----	F7	A PROC	×	H4	RF AMP	○
F4	V OUT	○	F8	ADDA	○	----	HEAD BUFF	×

NOTE: 1. If there is a ROM on P.C.Board, please confirm the software version. Refer to confirmation procedure of software version on previous page.

2. The DATA RAM(IC17) is installed on SYSCON Board and it data can not saved to other equipment.. When SYSCON Board exchanged, remove the IC17 on original Board and put it to New Board. Another way of move the data, write down all of User data, Service data and numerical value of Hour Meter and input the data to new RAM. But numerical value of Hour Meter can not input to VTR (Hour Meter information will be reset).

6. SERVO LED INFORMATION

SERVO LED light on Front Panel, when Cylinder and Capstan Servo are locked. In case of SERVO LED does not light on PLAY or REC condition, please check at LED condition on Servo P.C.Board for confirm the which Servo is faulty.
There are condition LED on the SERVO Board (F1) as follows.


CAP SERVO
CYL SERVO
SYSCON
COMMUNICATION
SERVO Board (F1)
Component Side
Front Side

- The LED nearest to front side light up, when Syscon CPU and SERVO CPU communication is correct.
- The center LED light up, when the cylinder servo is locked.
- The LED nearest to the Jack Board light up, when the capstan servo is locked.

Note: In case of capstan servo does not locked, please use function of Tracking mode selection on Service menu for confirm which servo is fault ATF or CTL.

7. Auto Off Error Message

In case of AUTO OFF Error is occurred, AUTO OFF LED light and error message appear on the Front Panel.

The number of below table indicates as priority display of message, when some error occurred at the same time.

No.	Display (20 characters)	Contents	VTR Operation	Detection Place	Reset Condition
1	Normal (EJECT)	After a cassette insertion, if cassette does not down within 6 seconds, VTR goes to EJECT mode.	EJECT	SYSCON	---
	FRONT LOAD MOTOR	After EJECT mode, if a cassette does not up within 6 seconds, [AUTO OFF] LED turns on and the message flashes.	STOP	SYSCON	POWER OFF → ON
2	Normal (EJECT)	Loading is not completed within 6 seconds, VTR goes to EJECT mode (unloading mode).	EJECT	SYSCON	---
	LOADING MOTOR	When unloading is not completed within 6 seconds, [AUTO OFF] LED turns on and message flashes.	STOP	SYSCON	POWER OFF → ON
3	SERVO CONTROL ERROR	If servo CPU does not respond within 1 seconds, [AUTO OFF] LED turns on and message flashes. <Actual Judgment> System control circuit sends COMM_TEST signal to Servo circuit and Servo circuit returns COMM_TEST_RET signal. If this signal is not returned within 1 seconds, “AUTO OFF” process is produced and Servo is reset for 50 ms.	STOP	SYSCON	POWER OFF → ON
4	SERVO ERROR	If only the Servo CPU perform reset operation by momentary power off, “AUTO OFF” occurred.	STOP	SYSCON	POWER OFF → ON

5	SERVO COMM ERROR	If Servo CPU does not response to command from SYSCON CPU during 10 second "AUTO OFF" LED is flashed.	STOP	SYSCON	POWER OFF → ON
6	FRONT LOAD ERROR	If Supply Reel Table rotated over time at Tape big./ end detected operation during Front loading	STOP	SERVO	POWER OFF → ON
7	WIND UP REEL NOT ROTA	When Capstan shaft send the tape 3 cm, Take-up reel FG count number is less than regulation value.	STOP	SERVO	POWER OFF → ON
8	WIND UP ERROR	Compare the tape movement between take up and supply reel, and if the difference is more than 2 cm, goes to "AUTO OFF" mode.	STOP	SERVO	POWER OFF → ON
10	UNLOAD ERROR	Reel does not wind the tape in the unloading mode. Reel FG is counted in each mechanism mode.	STOP	SERVO	POWER OFF → ON
12	S-FF/REW TIME/OVER	Reel operation does not finish at Tape beginning and end position.	STOP	SERVO	POWER OFF → ON
14	DRUM ROTATE TOO SLOW	Cylinder rotary speed is too slow. In the cylinder on mode, cylinder PG interval is more than 1.5 ms for 5 seconds or cylinder PG is not detected for 1 seconds.	STOP	SERVO	POWER OFF → ON
15	DRUM ROTAE TOO FAST	Cylinder rotary speed is too fast. PG interval is less than 3 ms for 2 seconds.	STOP	SERVO	POWER OFF → ON
16	CAP ROTATE TOO SLOW	Capstan rotary speed is too slow. In the capstan on mode, capstan FG is not detected for 5 seconds.	STOP	SERVO	POWER OFF → ON
19	S REEL ROTATE TOO FAST	S-REEL Rotation speed became too high more than 2 seconds.	STOP	SERVO	POWER OFF → ON

22	T-REEL ROTA TOO FAST	T-REEL Rotation speed became too high more than 2 seconds.	STOP	SERVO	POWER OFF → ON
24	T-REEL TORQUE ERROR	In the Reel mode, exceed reel torque, caused by tape run over load, is detected. If the T Reel Torque error voltage is more than 0.5V continuously, goes to Auto Off mode within 105 seconds.	STOP	SERVO	POWER OFF → ON
25	S-REEL TORQUE ERROR	In the Reel mode, exceed reel torque, caused by tape run over load, is detected. If the S Reel Torque error voltage is more than 0.5V continuously, goes to Auto off mode within 105 seconds or Over current flow to Reel Motor more than 0.55A for 2 seconds.	STOP	SERVO	POWER OFF → ON
26	CAP Tension Error	Tension error is detected in capstan mode. Tension sensor voltage (SERVO : TP201) is more than 4.7 V or less than 0.3 V for 2 seconds.	STOP	SERVO	POWER OFF → ON
27	REEL Tension Error	Tension error is detected in Reel mode. Tension sensor voltage (SERVO : TP201) is more than 4.7 V or less than 0.3 V for 2 seconds.	STOP	SERVO	POWER OFF → ON
28	REEL DIR UNMATCH	Take up Reel direction error is detected. Rotation of Take-up reel in opposite direction has continued through complete turn except speed 0 (stop)	STOP	SERVO	POWER OFF → ON

40	DEW	If the condensation has formed inside the VTR, [Auto Off] LED turns on and the message flushes, then VTR goes to Eject mode. <Reset Condition> After the cassette is ejected, Drum rotated to dry out the condensation. When condensation has been removed, message is cleaned and normal operation is enable. NOTE: 1) Drum rotated, when the condensation is detected inside the VTR. 2) If the condensation is detected, when insert the cassette to VTR.	EJECT	SYSCON	AFTER CONDEN-SATION is REMO-VED Refer to CON-TENTS
41	E-FF	The tape beginning and end position are detected simultaneously during loading or after loading completed mode.	STOP	SYSCON	POWER OFF → ON

* Other Operation.

1) If the Reel Base unit does not move to prescribed position within 3 seconds, Reel Motor goes to stop and the cassette is ejected.

8. AUTO OFF Check Point Table

Message	Check Point	
WINDUP_REEL_NOT_ROTA	Check the loosen of the tape before power on. ● S Reel side before capstan motor → S Reel side is abnormal at REV mode. ● T Reel side after capstan motor → T Reel side is abnormal at FWD mode	1. Check the dead point of Reel Motor in the Reel Torque Offset Adjustment mode. (Front Rear SW: 1-1 ON, MENU_SW ON, SET_SW ON) [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Check Servo board Motor Drive circuit (F1 board) TRH ± 1,2,3, SHR ± 1,2,3--- Fig. 1 TRM1,2,3, SRM1,2,3 --Fig. 2 ● Check Reel Motor Replace Reel Motor 2. Check Reel Brake Solenoid (Check the Reel Brake is smoothly released in the Reel Torque Offset Adjustment mode.) [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Check System Control board (F2 board) Solenoid Drive circuit S_BRAKE_N, T_BRAKE_N --- Fig. 3 3. Grease is not attached on the tape pass.

WINDUP_ERROR		1. Check the tension is normal. ● Check Spring power --- Refer to the specification of Tension Regulator Spring Adjustment ● Check Tension Voltage --- Refer to the Tension Voltage Check 1 Refer to the Tension Control Check. 2. Check the FG waveform is normal. Capstan FG --- Refer to Capstan FG Check 1 and Capstan FG Check 2 Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2 3. Check Reel Offset Torque --- Refer to Motor Torque Offset Adjustment. 4. Check Tape Pass Load 5. Check Tape Damage

UNLOAD_ERROR	Check the tape is surely wound.	1. Check dead point of Reel Motor in the Reel Torque Offset Adjustment mode. (Front Rear SW: 1-1 ON, MENU_SW ON, SET_SW ON) [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board Check Motor Drive circuit (F1 board) TRH ± 1,2,3, SHR ± 1,2,3--- Fig. 1 TRM1,2,3, SRM1,2,3 --Fig. 2 ● Check Reel Motor Replace Reel Motor. 2. Check Reel Torque Offset [In case of abnormal condition] Re-adjustment --- Motor Torque Offset Adjustment 3. Check Reel Brake Solenoid (Check the Reel Brake is smoothly released in the Reel Torque Offset Adjustment mode.) [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Check System Control board (F2 board) Solenoid Drive circuit S_BRAKE_N, T_BRAKE_N --- Fig. 3 4. Check Reel FG Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2

S_FF/REW_TIMEOVER	Check the problem occurred at tape beginning or tape, or other portion.	1. Check Reel FG Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2 [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Reel FG Sensor, Reel Replacement ● Check F1 board. 2. Check transparent tape detection. [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Replace sensors. ● Check F2 board. 3. Check the tape is not bent.
S_REEL_ROTA_TOO_FAST		1. Check Reel FG waveform. Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2 [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Reel FG Sensor, Reel Replacement ● Check F1 board. 2. Check Reel Drive circuit. TP450 and TP451 on F1 board --- less than 0.4 V

T_REEL_ROTA_TOO_FAST		1. Check Reel FG waveform. Reel FG --- Refer to Reel FG Check 1 and Reel FG Check 2 [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Reel FG Sensor, Reel Replacement ● Check F1 board. 2. Check Reel Drive circuit. TP450 and TP451 on F1 board --- less than 0.4 V
T_REEL_TORQUE_ERROR		1. Check Reel Torque Offset [In case of abnormal condition] Re-adjustment --- Motor Torque Offset Adjustment 2. Check Reel Brake Solenoid (Check the Reel Brake is smoothly released in the Reel Torque Offset Adjustment mode.) [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Check System Control board (F2 board) Solenoid Drive circuit S_BRAKE_N, T_BRAKE_N --- Fig. 3

S_REEL_TORQUE_ERROR		1. Check Reel Torque Offset [In case of abnormal condition] Re-adjustment --- Motor Torque Offset Adjustment 2. Check Reel Brake Solenoid (Check the Reel Brake is smoothly released in the Reel Torque Offset Adjustment mode.) [In case of abnormal condition] ● Check loosen of connector Mech I/F board, Mother board ● Check System Control board (F2 board) Solenoid Drive circuit S_BRAKE_N, T_BRAKE_N --- Fig. 3
DRUM_ROTATE_TOO_FAST		Check Cylinder PG Check Cylinder FG [In case of fast rotation] ● Check Cylinder flexible cable, connectors. ● Check CYL_ERR (TP400) voltage. Normal Rotation : TP400 = about 2.5 V During Full Acceleration : TP400 = 0 V EJECT mode : TP400 = 2.5 V Servo REF (IC207-2 pin) = about 2.5 V fix If above voltage is incorrect, servo board is not correct. [In case of FG is correct and PG is incorrect] PG signal flow is incorrect. (Cylinder >> Mech I/F >> Mother >> Servo)

DRUM_ROTATE_TOO_SLOW	Check that the tape is stick with the Cylinder. Check that the tape is stick with a part of the tape pass and it causes the high tension. In this case tape may brake the Cylinder rotation.	Check Cylinder PG Check Cylinder FG [In case of FG is correct and PG is incorrect] PG signal flow is incorrect. (Cylinder >> Mech I/F >> Mother >> Servo) [In case of both PG and FG are incorrect (Cylinder rotation is actually slow.)] (1) Check Cylinder Unit. Rotate the Cylinder in EJECT or UNLOAD condition. Check that the Cylinder smoothly rotate. If it is not smooth, the Cylinder unit is incorrect. (2) Check the rotary speed detection. Check that the CYL_FG_PRE (TP231) shows the pulse which is 4 pulses per rotation and the duty is 50 %, 0V/5V. If it is incorrect, FG signal flow is incorrect. (3) Check the Servo CPU outputs acceleration command. ● Check that acceleration voltage (less than 2.5 V) is output at CYL_ERR (TP400). ● Check that drive on signal which is 5 V at IC400-4 pin. when it is 2.5 V, it is OFF mode. (4) Check the Reference voltage. Check that SERVO_REF (IC207-2 pin) voltage is about 2.5 V. -→ If (3) or (4) is incorrect, surround circuit of CPU, D/A is incorrect. (5) Check that Power Supply voltage. Check that Drive IC voltage (VCC 5V : IC400-27 pin) and Motor Drive voltage CYL_VM (Q400 -1 or 8 pin). The VM is positive voltage during Cylinder ON. → If it is correct, between Motor Drive and Cylinder is incorrect. Check connectors of Cylinder, Mech I/F and Mother.

CAP_ROTATE_TOO_SLOW	Check the tape is not stacked with the tape pass and tension is not high. Check the mechanical load of Capstan.	Refer to Capstan FG check (1) and (2). ● In case of the Capstan Motor overrunning even the message is too slow. The FG signal which is used to detect capstan speed is not supplied to the SERVO CPU. Check the frequency at CAP_FG1,2 (TP80, 82) is correspond with the rotary speed. (about 1.58 kHz, 0/5 V in REC/PB mode). Check the connectors of Capstan, Mech I/F and Mother. ● In case of Capstan does not rotate. (1) Check the Servo CPU supplies the acceleration command. Check the SERVO_REF (IC207-2 pin) is about 2.5V. Check the CAP_ERR (TP401) is acceleration command. It is below than SERVO_REF voltage. If the capstan does not rotate, the CAP_ERR voltage should be 0 V. Check Drive ON signal (IC401 - 4 pin) i s 5 V (rev) and 0 V (fwd), 2.5 V (OFF). (2) Check the Power Supply voltage. Check the Drive IC power voltage (VCC 5V : IC401 - 27 pin). Check Motor Drive voltage CAP_VM (Q402 - 1 or 8 pin). (3) Check the Drive signal is supplied to Capstan motor. Check the connectors of Capstan, Mech I/F and Mother. If above conditions are correct, motor or drive circuit is incorrect.

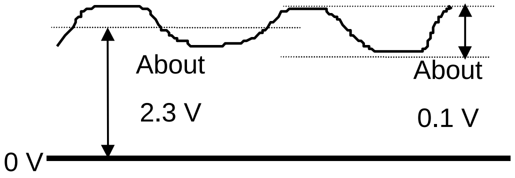
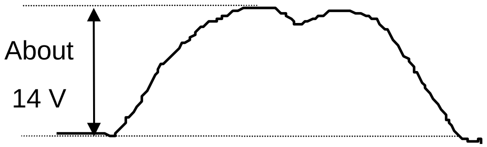
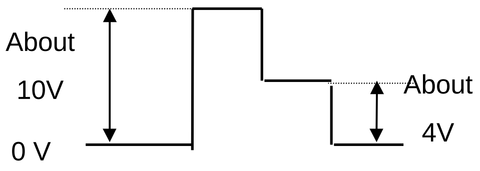
Fig 1 REEL Position Detect		Rotate the REEL motor in EJECT mode and check the following waveform. F1 board P2 - 10a TRH1+ 10b TRH1- 10c TRH2+ 11a TRH2- 11b TRH3+ 11c TRH3- 12c SRH1+ 13a SRH1- 13b SRH2+ 13c SRH2- 14a SRH3+ 14b SRH3-
Fig2 REEL Drive Waveform		Set Front Rear SW 1-1 ON. Select T or S_REEL_TRQ on the MENU, and rotate the REEL and confirm the following waveform is like Fig. 2. F1 board P2-23b TRM3 23c TRM1 24c TRM2 25b SRM3 25c SRM1 26c SRM2

Fig. 3 Brake Solenoid		Set Front Rear SW 1-1 ON. Select T or S_REEL_TRQ on the MENU, and check the waveform like Fig. 3 appears at following positions at Brake is released. ● T_REEL_TRQ selection F2 board P2 -25C T_BRAKE_N ● S_REEL_TRQ selection F2 board P2 -23C S_BRAKE_N

SECTION 3

MAINTENANCE/DISASSEMBLY PROCEDURES & MECHANICAL ADJUSTMENT

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1. Maintenance

1-1.Maintenance Part Chart

No	Name	Part Number	Part Using Hours (Unit hours)					
			2,000	4,000	6,000	8,000	10,000	12,000
.	Tape Path Cleaning		∆Clean the Tape Path at each 500 hours					
1	Cylinder Unit	VEG1337	●	●	●	●	●	⊙
2	Cleaning Arm Unit	VXL2748	●	●	●	●	●	⊙
3	Pinch Arm Unit	VXL2835		●■		●■		⊙
4	S Reel Motor Unit	VEM0686			●			⊙
5	T Reel Motor Unit	VEM0687			●			⊙
6	Thrust Screw Unit	VXQ0556			●⮙			⊙
7	Front Loading Unit	VXA6070						●
8	Mech. Chassis Unit	VXY1431Z1						●
9	Fan Motor	VRF0190	Replace the Fan Motor at each 10,000 hours ***Operation Time***					

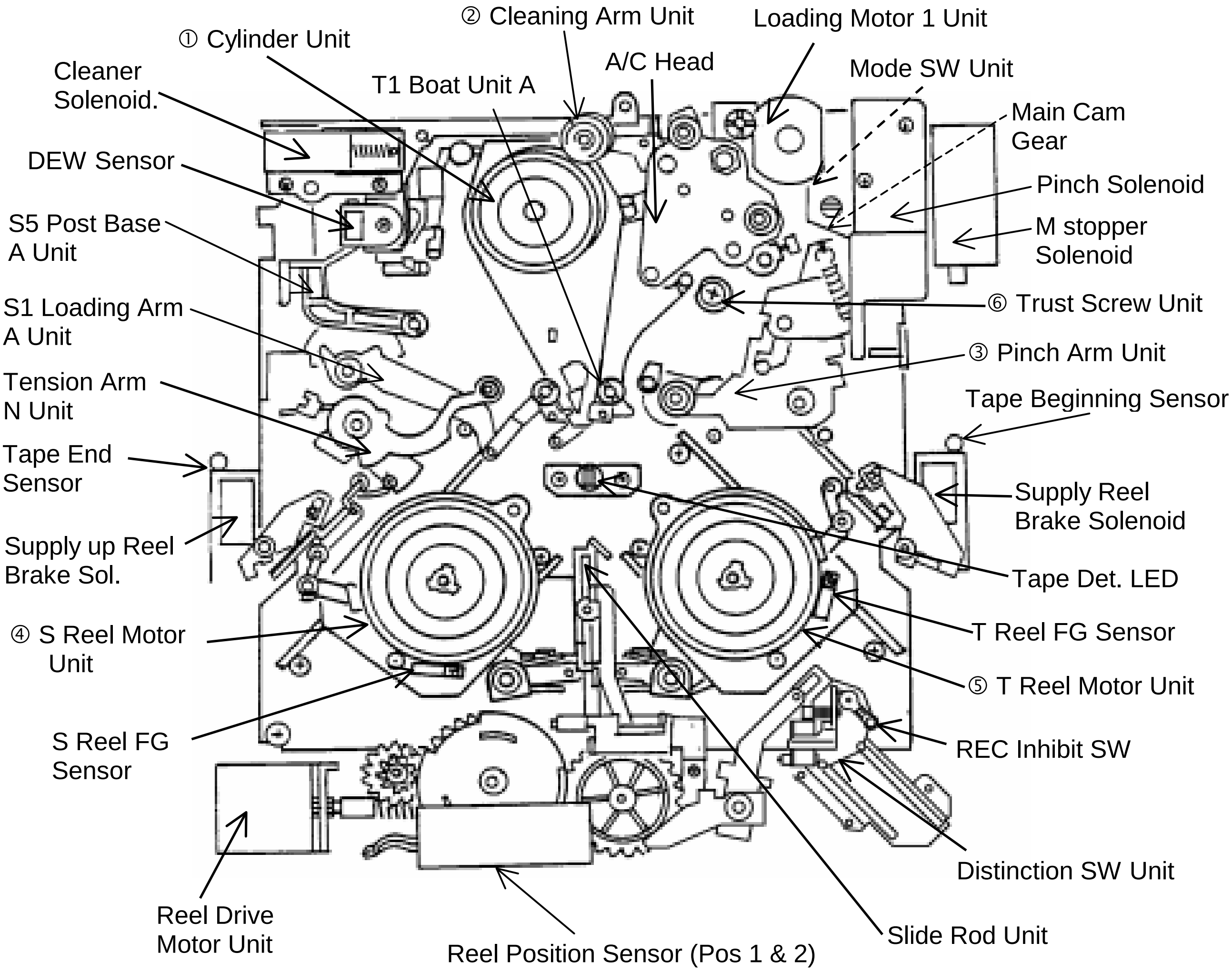
Note: Using hours are based on the head rotation hours.

Using hours are recommendation. It may depended on temperature, humidity or dusty.

Using hours are listed as the reference of maintenance. They do not mean guarantee Hours.

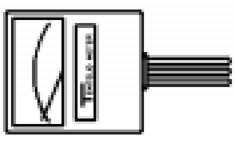
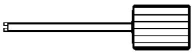
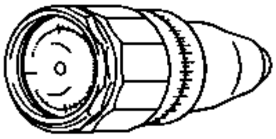
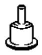
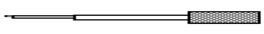
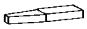
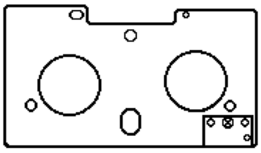
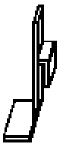
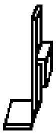
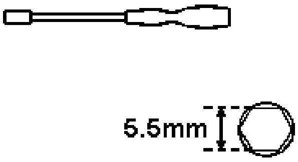
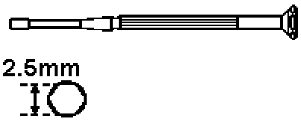
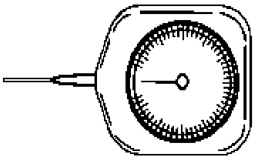
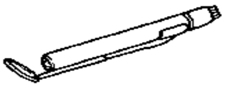
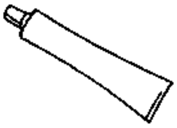
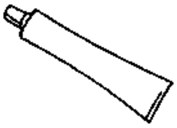
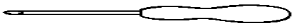
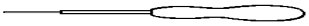
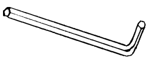
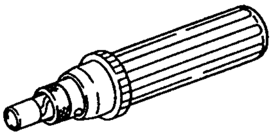
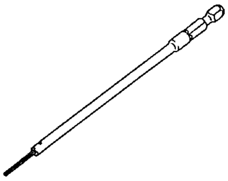
Symbol	Maintenance	Remark
●	Replacement	
⊙	Replacement	These parts are included in Mech Chassis Unit
■	Greasing	Wipe the old grease and apply new grease
∆	Cleaning	This mark means cleaning is necessary
⮙	Lubrication	The lubrication is necessary

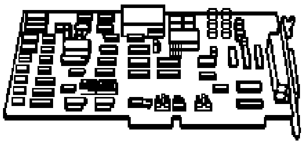
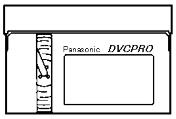
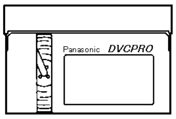
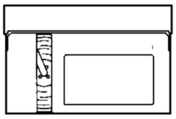
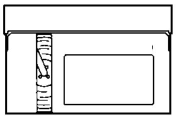
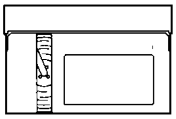
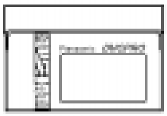
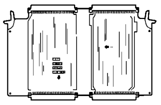
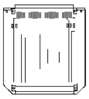
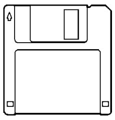
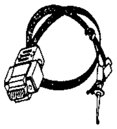
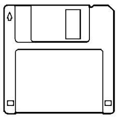
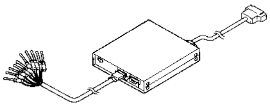
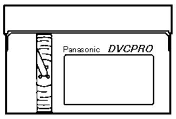
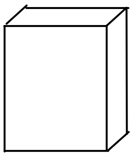
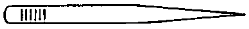
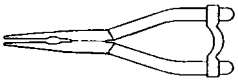
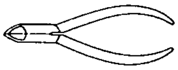
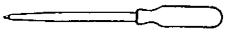
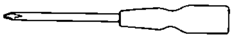
1-2. Sensors Layout


② Cleaning Arm Unit
Loading Motor 1 Unit
① Cylinder Unit
A/C Head
Mode SW Unit
Cleaner Solenoid.
T1 Boat Unit A
Main Cam Gear
DEW Sensor
Pinch Solenoid
S5 Post Base A Unit
M stopper Solenoid
S1 Loading Arm A Unit
⑥ Trust Screw Unit
③ Pinch Arm Unit
Tension Arm N Unit
Tape Beginning Sensor
Tape End Sensor
Supply Reel Brake Solenoid
Supply up Reel Brake Sol.
Tape Det. LED
④ S Reel Motor Unit
T Reel FG Sensor
⑤ T Reel Motor Unit
S Reel FG Sensor
REC Inhibit SW
Distinction SW Unit
Reel Drive Motor Unit
Slide Rod Unit
Reel Position Sensor (Pos 1 & 2)

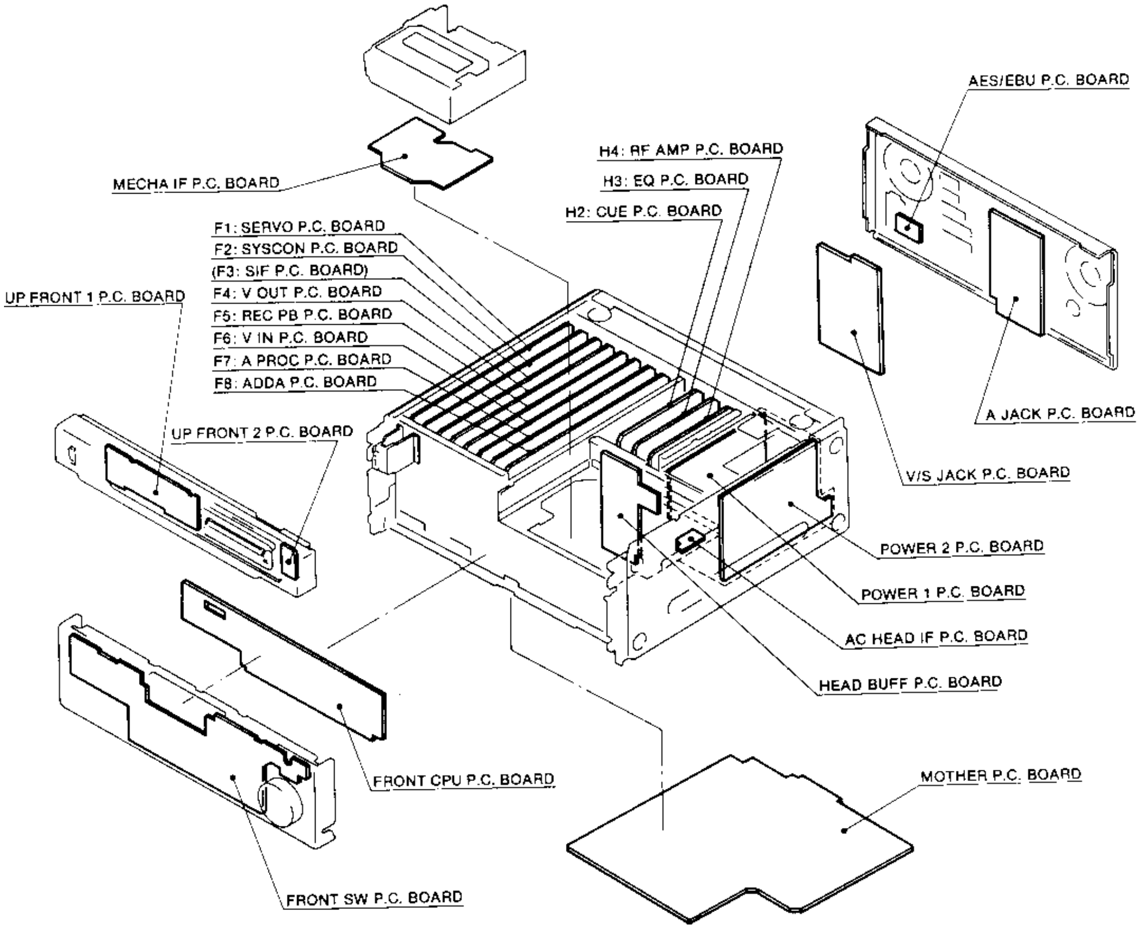
1-3. Servicing Fixtures & Tools

No.	Part No.	Name	AJ-D850	Remark
1	VFK1145	Back Tension Meter (T2-M30-P)	○	
2	VFK1149	Post Driver	○	
3	VFK71	Dial Torque Gauge (150 g)	○	
4	VFK1191	Dial Torque Gauge (45g)	○	
5	VFK1152	Dial Torque Gauge Adapter	○	
6	VFK0357	Eccentric Screwdriver (1.5)	○	
7	VFK1154	Post Height Fixture	○	
8	VFK1153	Mech. Neutral Plate(Post)	○	
9	VFK0906	Oil	○	
10	VFK1155	REV Position Tool (Silver color)	○	
11	VFK1156	PLAY Position Tool (Black color)	○	
12	VFK1208	Neutral Position tool (Black with hole)	○	
13	VFK1150	Nut Driver (5.5mm)	○	
14	VFK1151	Nut Driver (2.5mm)	○	
15	VFK1188	Dial Tension Gauge (30g)	○	
16	VFK0948A	Check Light	○	
17	VFK0749	Froiral Grease (White: for plastic part)	○	
18	M0R265	Morlytone Grease (Black: for metal part)	○	
19	VFK1146	Philips Driver (00-75)	○	
20	VFK1147	Philips Driver (00-100)	○	
21	VFK1148	Hex. Driver (1.5mm)	○	
22	VFK1178	Hex. Driver (0.89mm)	○	
23	VFK1179	Hex. Driver (0.71mm)	○	
24	VFK1190	Hex. Wrench (1.5mm)	○	
25	VFK1209	Torque Driver(0.4-3Kg)	○	
26	VFK1375	Post Axis Driver(1.5mm)	○	or VFK0912
27	VFK1300	A/D Converter Board (DAQ-12 Quatech)	○	Purchase Locally
28	VFM3580KM	Alignment Tape (No.1)	○	for NTSC
29	VFM3581KM	Alignment Tape (No.2)	○	for NTSC
30	VFM3582KM	Alignment Tape (No.3)	○	
31	VFM3680KM	Alignment Tape (No.1)	○	for PAL
32	VFM3681KM	Alignment Tape (No.2)	○	for PAL
33	VFM3682KM	Alignment Tape (No.3)	○	for PAL
34	VFM3000EDS	Alignment Tape (DV LISTA)	○	
35	VFM3010EDS	Alignment Tape (DV Color Bar)	○	for NTSC
36	VFM3010EDS	Alignment Tape (DV Colour Bar)	○	for PAL
37	AJ-CL12MP	Cleaning Tape	○	
38	VFK1192	Extension Board (F)	○	
39	VFK1193	Extension Board (H)	○	
40	VFK1481	LISTA Software	○	
41	VFK1186	LISTA Cable	○	
42	VFK1160C	RF Adjustment Software	○	
43	VFK1163	RF Adjustment Tape	○	
44	VFK1423	Tape Det. Sensor Cassette	○	
45	VZZ0095	Cleaning Cross	○	
46	VFK0369	Tweezers	○	
47	VFK0371	Radio Prier	○	
48	VFK0372	Cutter Prier	○	
49	VFK0338	Trimmer Adjustment Driver	○	
50	VFK0337	Philips Driver	○	

1 VFK1145 Back Tension Meter  Model:T2-M30-P	2 VFK1149 Post Driver 	3 VFK71 (150g) 4 VFK1191(45g) Dial Torque Gauge 	5 VFK1152 Dial Torque Gauge Adapter 
6 VFK0357(ø1.5) Eccentric Screwdriver 	7 VFK1154 Post Height Fixture 	8 VFK1153 Mech Neutral Plate(Post) 	9 VFK0906 OIL (for Thrust Adjustment screw)
10 VFK1155 (REV, Silver) 11 VFK1156 (PLAY, Black) 12 VFK1208(Neutral,Black With hole)  (Gold)  (Black)	13 VFK1150 Nut Driver(5.5mm) 	14 VFK1151 Nut Driver(2.5mm) 	15 VFK1188(30g) Dial Tension Gauge 
16 VFK0948A(or purchase locally) Check Light 	17 VFK0749 Froiral Grease(White) (for plastic part) 	18 MOR265 Morlytone Grease(Black) (for metal part) 	19 VFK1146 (00 x 75) 20 VFK1147 (00 x 100) Philips Driver 
21 VFK1148(1.5mm) 22 VFK1178(0.89mm) 23 VFK1179(0.71mm) Hex. Driver 	24 VFK1190 (1.5mm) Hex. Wrench 	25 VFK1209 Torque Driver(0.4-3Kg) 	26 VFK1375 or VFK0912 Post Axis Driver(1.5mm) 

27 VFK1300 A/D Converter Board (For Quatech. DAQ-12 Purchase Locally) 	28 VFM3580KM 29 VFM3581KM 30 VFM3582KM DVC PRO Alignment Tape (for NTSC) 	31 VFM3680KM 32 VFM3681KM 33 VFM3682KM DVC PRO Alignment Tape (for PAL) 	34 VFM3000EDS DV Alignment Tape (LISTA) 
35 VFM3010EDS DV Alignment Tape (Color Bar) (for NTSC) 	36 VFM3110EDS DV Alignment Tape (Colour Bar) (for PAL) 	37 AJ-CL12MP Cleaning Tape 	38 VFK1192 --- (F) 39 VFK1193 --- (H) Extension Board  (F)  (H) Common for AJ-D750
40 VFK1481 LISTA Software 41 VFK1186 LISTA Cable  	42 VFK1160C RF Adjustment Soft 	43 VFK1163 RF Adjustment Tool 	44 VFK1423 Tape Sensor Cassette (M Cassette) 
45 VZZ0095 Cleaning Cross 	46 VFK0369 Tweezers 	47 VFK0371 Radio Prier 	48 VFK0372 Cuntter Prier 
49 VFK0338 Trimmer Adjustment Driver 	50 VFK0377 Philips Driver 		

1-4. CIRCUIT BOARD LOCATION


AES/EBU P.C. BOARD
H4: RF AMP P.C. BOARD
H3: EQ P.C. BOARD
H2: CUE P.C. BOARD
MECHA IF P.C. BOARD
F1: SERVO P.C. BOARD
F2: SYSCON P.C. BOARD
(F3: SIF P.C. BOARD)
F4: V OUT P.C. BOARD
F5: REC PB P.C. BOARD
F6: V IN P.C. BOARD
F7: A PROC P.C. BOARD
F8: ADDA P.C. BOARD
UP FRONT 1 P.C. BOARD
UP FRONT 2 P.C. BOARD
A JACK P.C. BOARD
V/S JACK P.C. BOARD
POWER 2 P.C. BOARD
POWER 1 P.C. BOARD
AC HEAD IF P.C. BOARD
HEAD BUFF P.C. BOARD
MOTHER P.C. BOARD
FRONT CPU P.C. BOARD
FRONT SW P.C. BOARD

1-5. Alignment Tapes

DVCPRO Alignment Tape

VFM3580KM(NTSC)

Time	Video		PCM		CUE	
(min)	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar SMPTE(75%)	Composite Video Level Confirmation	1kHz - 20dB	Audio Level Confirmation	1kHz 0VU	CUE Level Confirmation
7:00	Color Bar Full Field(75%)	Component Video Level Confirmation				
14:00	H Sweep	Frequency Response			6kHz 0VU	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse&Bar	Y/C Timing			-10dB, 1kHz 50Hz ~ 15kHz	Frequency Response
26:00 30:00	Area Markers					

VFM3581KM(NTSC)

Time(min)	Signal
0:00~20:00	ITI Pattern

VFM3582KM(NTSC)

Time(min)	Signal
0:00~10:00	X Value

VFM3680KM (PAL)

Time	Video		PCM		CUE	
(min)	Signal	Purpose	Signal	Purpose	Signal	Purpose
0:00	Color Bar 100%	Video Level Confirmation	1kHz -18dBu	Audio Level Confirmation	1kHz Reference level	CUE Level Confirmation
10:00	H Sweep	Frequency Response				
14:00	Area Markers				6kHz Reference level	A/C Head Azimuth
18:00	Bowtie(500k)	Y/C Timing				
22:00	Pulse & Bar	Y/C Timing			1kHz 300Hz~6kHz	Frequency Response
26:00 30:00	Multi Pulse	Y/C Timing				

VFM3681KM (PAL)

Time (min)	Signal
0:00 ~ 20:00	ITI Pattern

VFM3682KM (PAL)

Time (min)	Signal
0:00 ~ 10:00	X Value

1-6. Recommended Test And Service Equipment

NTSC

Part No.	Name	Remark
TSG130A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1750,1760(OP.SC) or 1780R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz-500KHz
	Audio Analyzer	

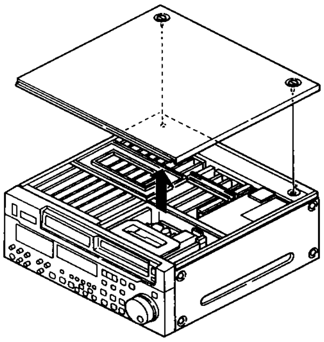
PAL

Part No.	Name	Remark
TSG131A(OP.04)	Analog Component Signal Generator	TEKTRONIX
	Oscilloscope	
1751,1761(OP.SC) or 1781R	WFM Monitor	TEKTRONIX
	Digital Volt Meter	
	Frequency Counter	
	VTVM	Frequency Band Width 4Hz-500KHz
	Audio Analyzer	

2. Disassembly Method

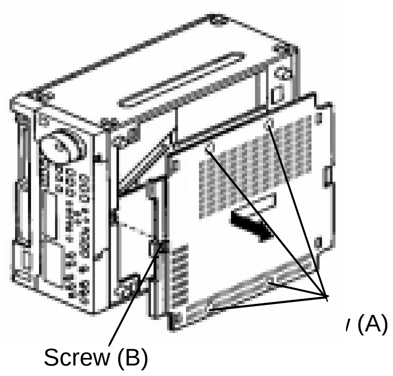
2-1. Removal of Top Panel

1. Loosen the two screws on the top panel.



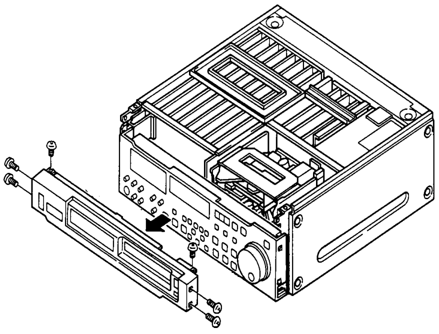
2-2. Removal of Bottom Panel

1. Unscrew the 4 screws (A) and loosen the screw (B).
2. Slide the bottom panel to front direction and remove the bottom panel.



2-3. Removal of Upper Front Panel

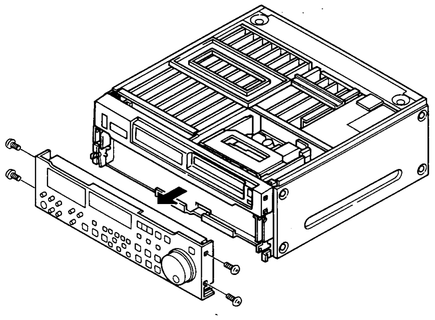
1. Draw up the Front Panel and unscrew the 6 screws.
2. Remove the Upper Front Panel and disconnect the one connector.



Note: **After installation of Upper Front Panel, confirm that the Blinder Panel is moved up and down smoothly by hand. If not, the Blinder Panel is caught by Blind Panel Opener.**

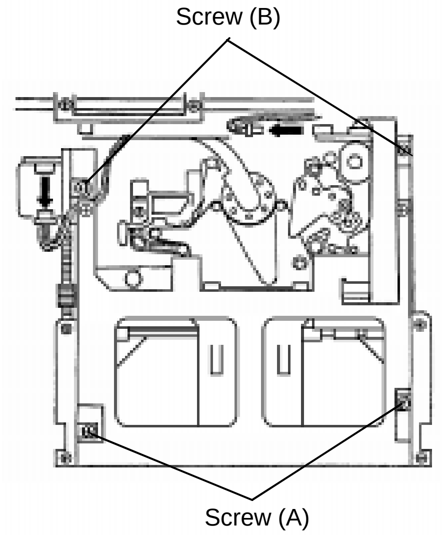
2-4. Removal of Front Panel

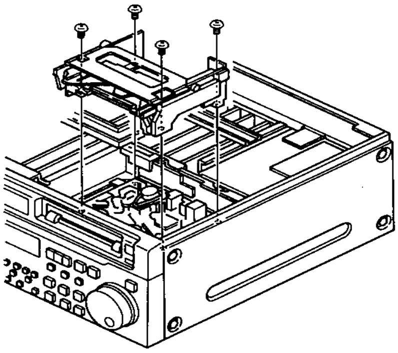
1. Remove the Upper Front Panel.
2. Draw up the Front Panel and unscrew the 4 screws and disconnect one connector, then remove the Front Panel.



2-5. Removal of Front Loading Unit

1. Move the Cassette Holder until the 2 screws (A) can be removal position.

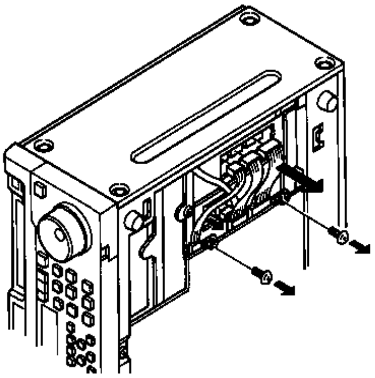




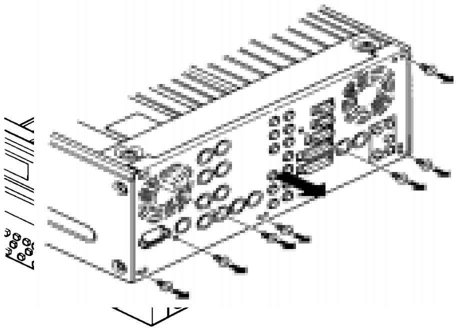
2. Disconnect 2 connectors at Front Loading motor part and the mechanism interconnection board.
3. Unscrew the 4 screws (A) and (B), then remove the Front Loading Unit.

2-6. Removal of Power Supply unit

1. Remove the Bottom Panel.
2. Disconnect the 5 connectors with the Power Supply unit at the VTR bottom side.
3. Unscrew the 2 screws with the Power Supply unit at the VTR bottom side.

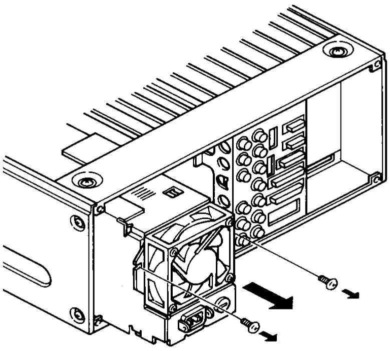


4. Unscrew one screw with the Power Supply unit on the VTR top side.



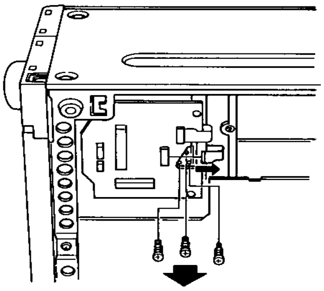
5. Unscrew the 7 screws and remove the Rear Jack Panel.

6. Unscrew the 2 screws with the Power Supply unit at the VTR rear side, then Power Supply Unit can be removal..

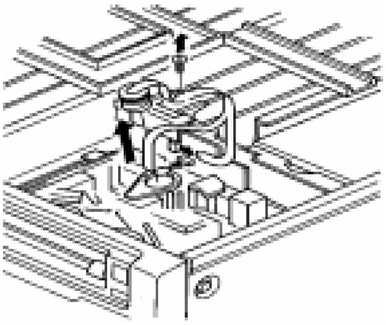


2-7. Removal of Cylinder Unit

1. Remove the Bottom Panel
2. Disconnect the connector P33 on the Mech. I/F Board. And remove the 3 screws which have spring from the cylinder unit..

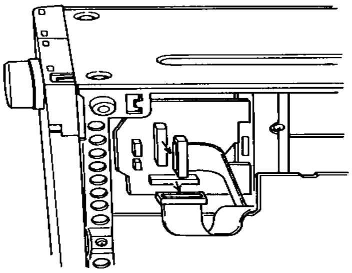


3. Remove the one screw which is fixed with the flexible cable, it attached Cylinder Unit..
4. Disconnect the connector P5002 and P5003 on the Head Buffer Board, then remove the cylinder unit without touching any mechanism parts.
   - Assemble procedures are reverse of the disassembly method.

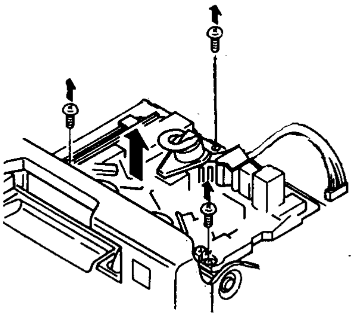


2-8. Removal of Mechanism Unit

1. Remove the Front Loading unit.
2. Remove the Bottom Panel.
3. Disconnect the connector P1 and P2 on the Mech. I/F Board.
4. Disconnect the connector P1 on A/C Head I/F Board for remove the A/C Head cable.

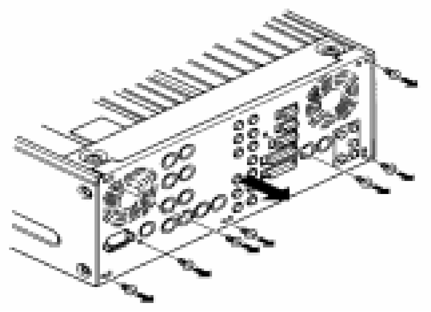


5. Disconnect the connector P5002 and P5003 on the Head Buffer board.
6. Unscrew the 3 screws and remove the mechanism unit.

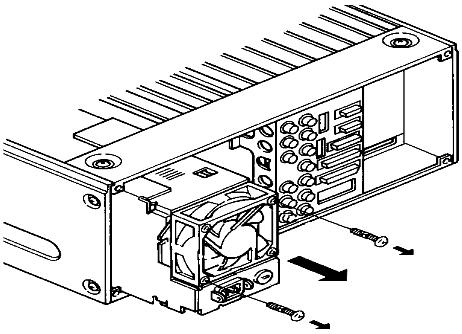


2-9. Removal of Fun Motor Unit

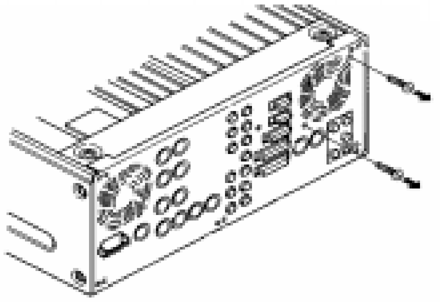
1. Unscrew the 7 screws and remove the Rear Jack Panel.



2. Unscrew the 2 screws and disconnect the connector P14 on the Power 2 P.C.B. ,then remove the Fan Motor as shown as below figure.



3. Unscrew the 2 screws and disconnect the connector P32 on Mother P.C.B. ,then remove the Fan Motor as shown as below figure.



3. Manual Tape Eject

When a tape can not be ejected, because of Power failure or mechanical tape damage, remove the tape manually.

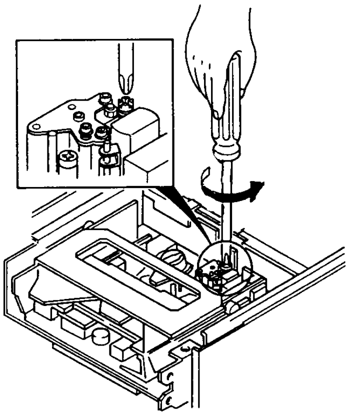
1. Turns power off and remove the top Case Unit.
2. Rotate the red plastic screw by a Phillips - head screwdriver counterclockwise pushing the screw. It needs to rotate about 30 times rotation until starting to move.
3. Since tape slack will develop when the post is unloaded, wind up the supply reel to take up the slack.

   How to take up the slack (see ③)

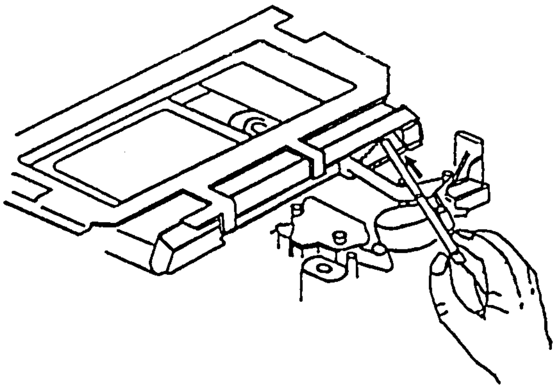
   a. Insert the rubber side of the take-up jig into the cassette tape withdrawal opening on the VTR's mechanism side.

   b. Turn the flange part of the supply reel in the direction of take-up to take up the tape slack. (Take care not to damage the tape in the process.)

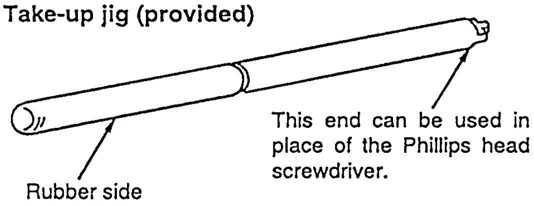
②



③

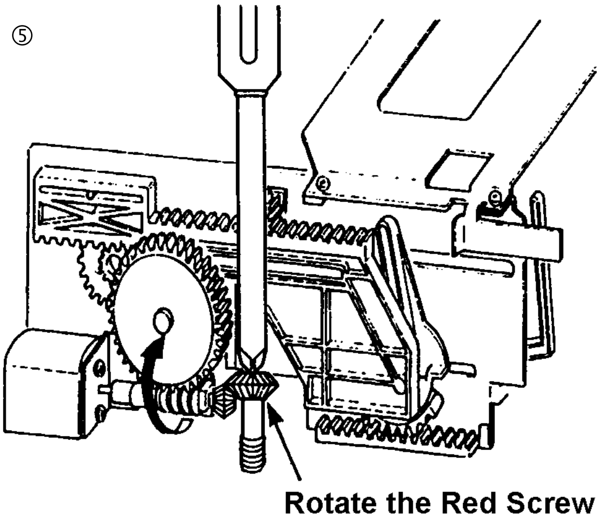


Take-up jig (provided)


This end can be used in place of the Phillips head screwdriver.
Rubber side

4. Repeat item 2 and 3 until the tape in wound Completely inside of the cassette.
5. When the tape is completely inside of the cassette, rotate the red screw in front of the worm gear of the cassette down motor clockwise by a Philips-head screwdriver pusing the screw and remove the cassette cover does not bite the tape when the cover is closed.

⑤



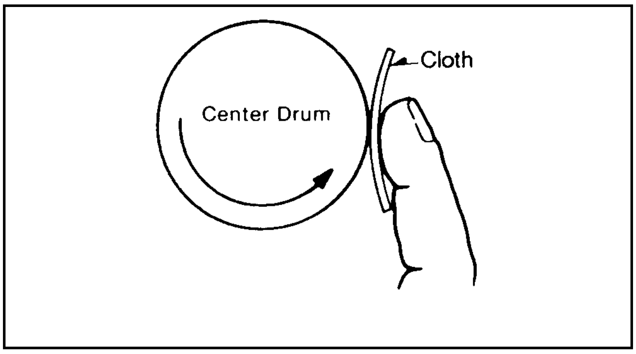
4. Cleaning Procedures

Note: Turns power off during cleaning.

Make sure the power is OFF before cleaning. Use ethanol(more than 99% purity) as cleaning liquid.

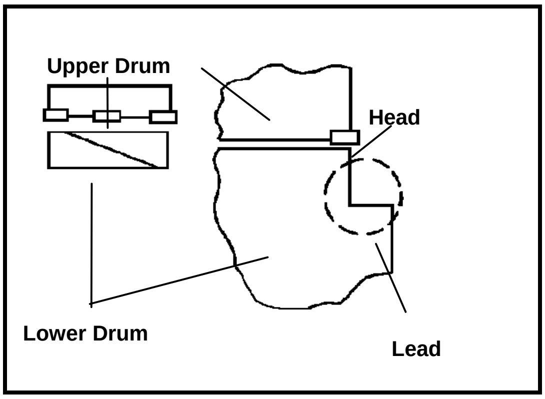
4-1 Cleaning of Head Chips: (Daily)

Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion. Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.



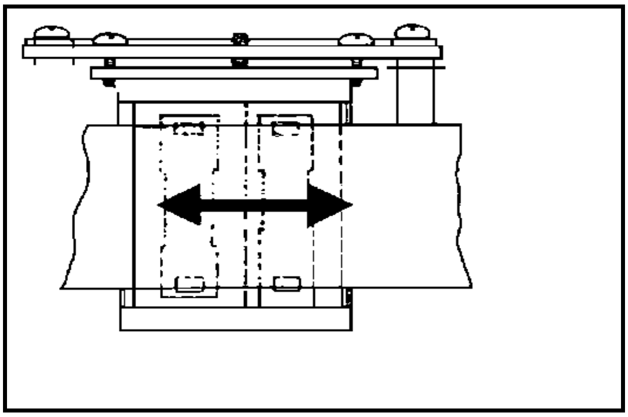
4-2. Cleaning of Drum Lead: (Weekly)

Be careful not to touch a head chip. Clean the drum lead with a pick.



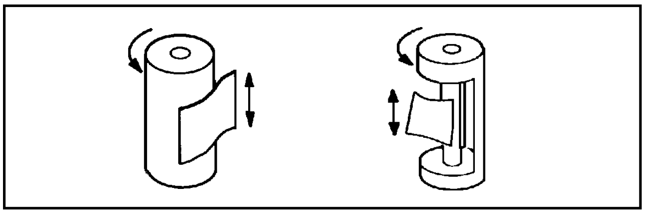
4-3. Cleaning of A/C Head: (Weekly)

Wipe the A/C head with a cloth soaked by cleaning liquid. Wipe again with a dry cloth.



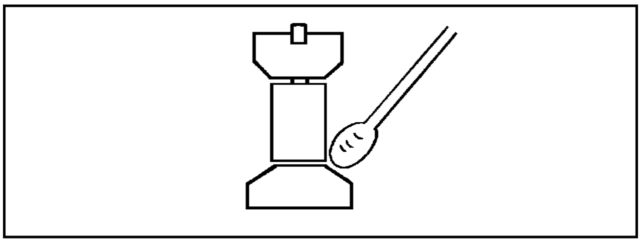
4-4. Cleaning of Pinch Roller and Capstan: (Weekly)

Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.



4-5. Cleaning of Post :(Weekly)

Wind a cloth on a pick. Wipe each post dry with that pick . Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.



Note:

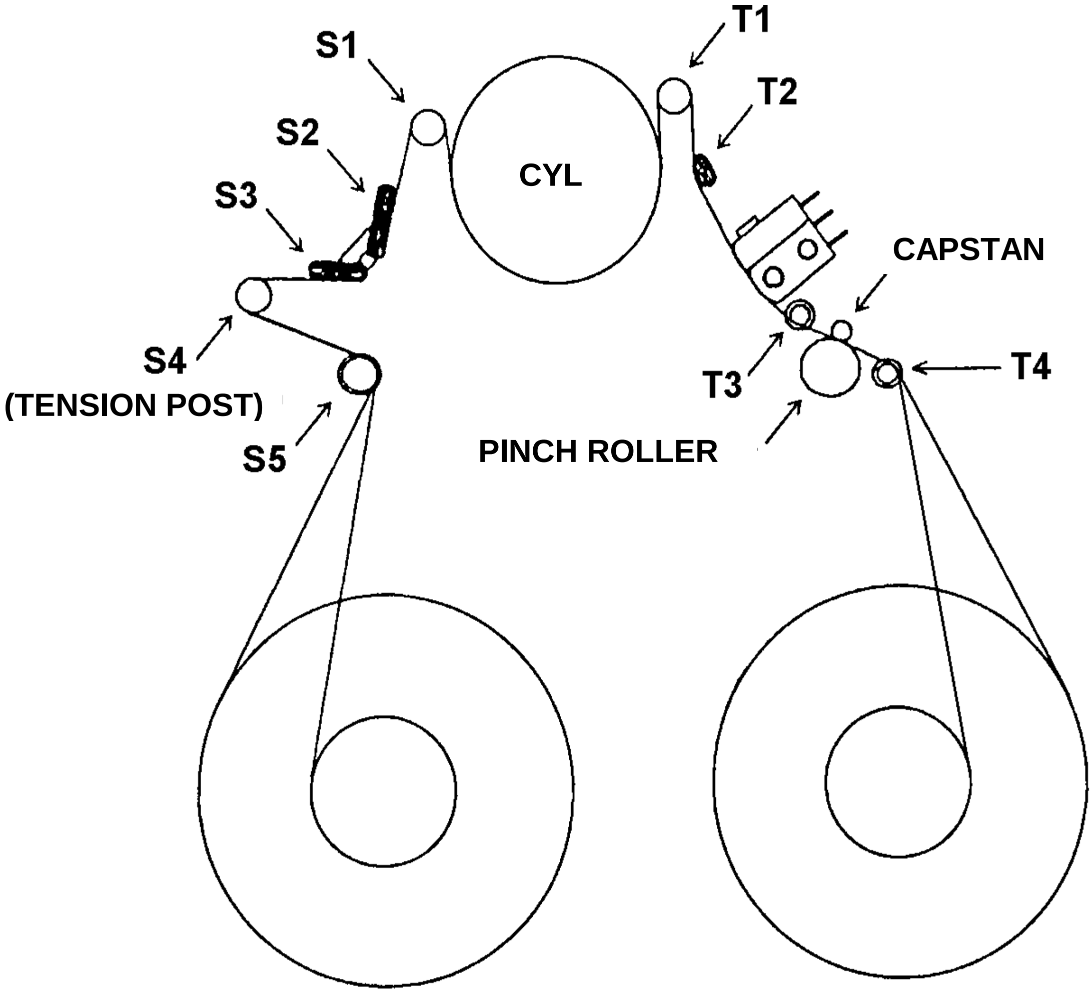
Use the clean cloth for cleaning purpose. Do not use any dirty cloth.

The Cleaning Cloth can be ordered as spare part. The part number indicated as below.

CLEANING CLOTH : VZZ0095

5. Mechanical Adjustment

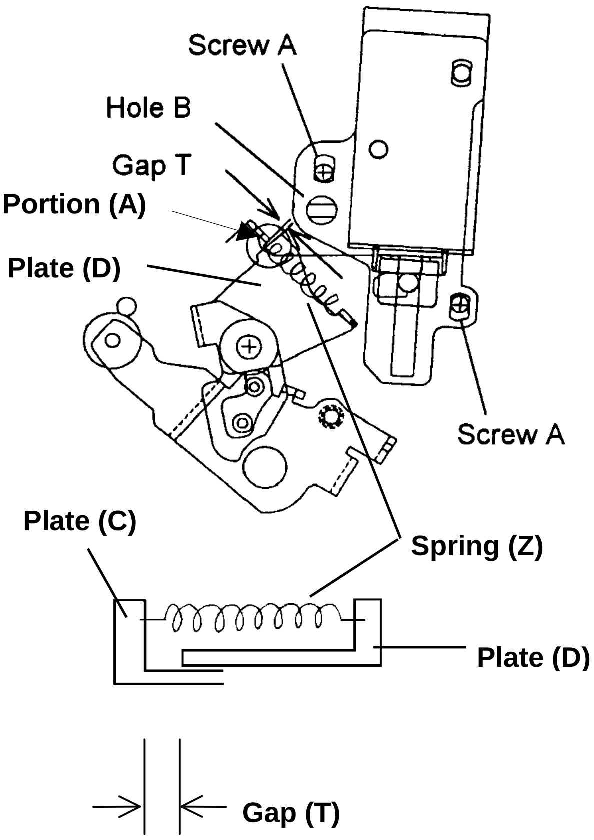
5-1. Name of tape transportation

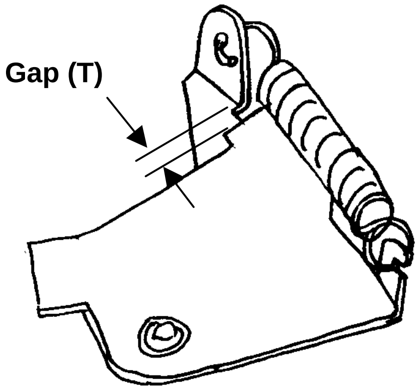

S1
T1
T2
S2
CYL
S3
CAPSTAN
S4
(TENSION POST)
T3
T4
S5
PINCH ROLLER

5-2.Pinch Solenoid Position Adjustment

SPEC.	T = 0.3mm
TEST POINT	Gap T
ADJUSTMENT	Screw(A), Hole(B)
MODE	EJECT (Power OFF)
TOOL	VFK0357(Eccentric Driver)

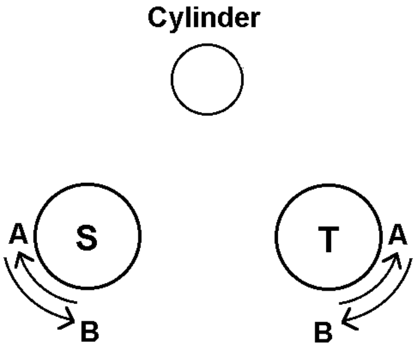
1. Confirm the power of condition at VTR.
2. Push the pinch roller by hand to be close to capstan.
3. Push the pinch solenoid by hand so that the pinch roller contacts capstan.
4. Loosen the two screws (A) and adjust the hole (B) by VFK0357 so that gap (T) is within specification.
5. The position for confirm Gap, which is located spring scratch to Plate (C) side.


Screw A
Hole B
Gap T
Portion (A)
Plate (D)
Screw A
Plate (C)
Spring (Z)
Plate (D)
Gap (T)



5-3. Main Brake Torque Confirmation

SPEC	Direction A : more than 80g Direction B : more than 15g
TEST POINT	S reel, T Reel
MODE	EJECT (POWER OFF)
TOOL	VFK71(150g), VFK1191(45g), VFK1152



1. Remove the Cassette Up Unit.
2. Install the adapter (VFK1152) to the torque gauge (VFK71).
3. Put the torque gauge on **S Reel and** Turn the torque gauge to **direction A** until **S Reel** slips against brake.
4. Confirm the torque is within specification.
5. Put the torque gauge on **T Reel** and turn the torque gauge to **direction A** until **T Reel** slips against brake.
6. Confirm the torque is within specification
7. Install the adapter (VFK1152) to the torque gauge (VFK1191).
8. Put the torque gauge on **S Reel and** turn the torque gauge to **direction B** until **S Reel** slips against brake.
9. Confirm the torque is within specification.
10. Put the torque gauge on **T Reel** and turn the torque gauge to **direction B** until **T Reel** slips against brake.
11. Confirm the torque is within specification.

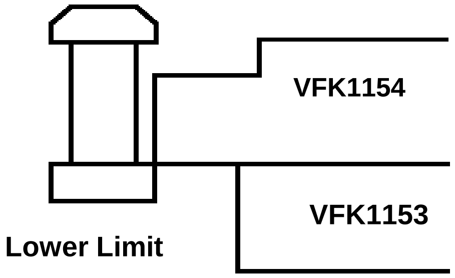
5-4. Post Height Pre-adjustment

MODE	EJECT (POWER OFF)
TOOL	VFK1153, VFK1154 (Flange Tool)

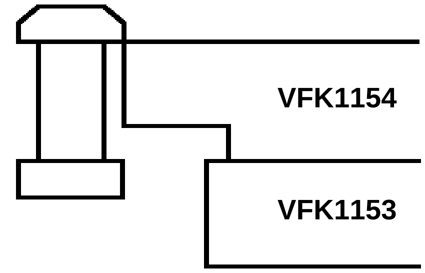
1. Turn the power OFF and then set the tube* to cover the sensor LED and place the unit in no tape loading mode.
2. **NOTE:** Make a tube* by yourself.
3. Install the Mech. Neutral Plate (VFK1153) and adjust each post height as shown in figure.
4. Adjust the each post to Lower limit by VFK1154 as shown in figure.
5. VFK1149 use for Post height adjustment of S4 and S5 post. VFK1151 use for Post height adjustment of T3 and T4 post.

Post	Limit	Post Driver
S5 Post	Lower*	VFK1149
S4 Post	Lower*	VFK1149
T3 Post	Lower	VFK1151(2.5mm Nut Driver)
T4 Post	Lower	VFK1151(2.5mm Nut Driver)

Note: Lower* : Turn **S4** and **S5** posts 1 round more counterclockwise from lower limit position.

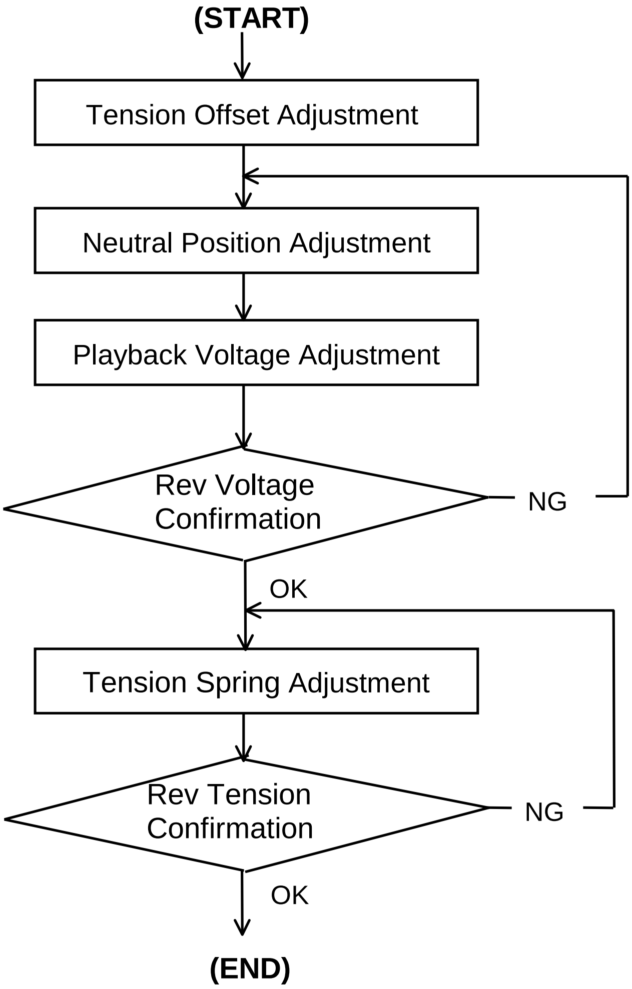


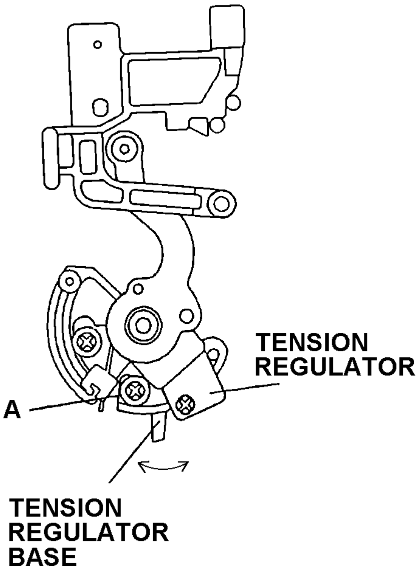
Lower Limit



Upper Limit

5-5. Tension Adjustment Flowchart

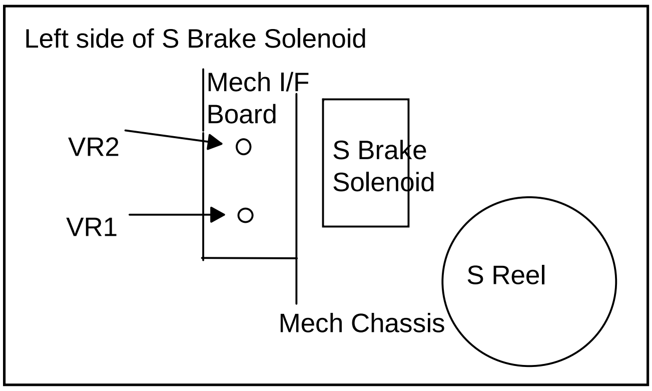

(START)
Tension Offset Adjustment
Neutral Position Adjustment
Playback Voltage Adjustment
Rev Voltage Confirmation
NG
OK
Tension Spring Adjustment
Rev Tension Confirmation
NG
OK
(END)


TENSION REGULATOR
A
TENSION REGULATOR BASE

5-6. Tension Offset Adjustment

BOARD	SERVO
SPEC	2.5 ± 0.05V
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	VR1(MECH I/F)
MODE	EJECT
TOOL	Digital Volt Meter

1. Adjust the **VR1** so that the DC voltage at **TP201** is within specification.


Left side of S Brake Solenoid
Mech I/F Board
VR2
VR1
S Brake Solenoid
S Reel
Mech Chassis

5-7. Tension Arm Neutral Position Adjustment

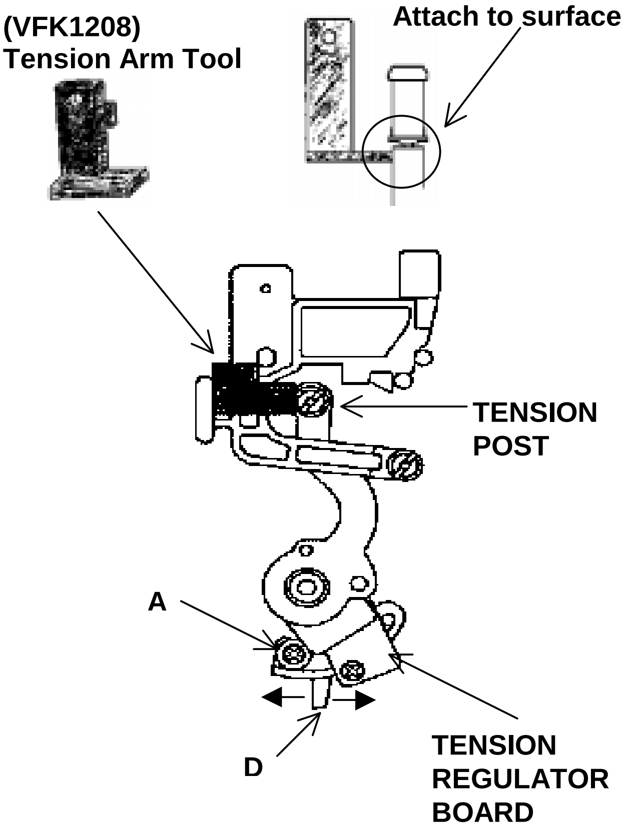
BOARD	SERVO
SPEC	2.5 ± 0.1V
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	Base position of Tension Regulator Board
MODE	STOP
TOOL	Digital Volt Meter VFK1208 (Black, with hole)

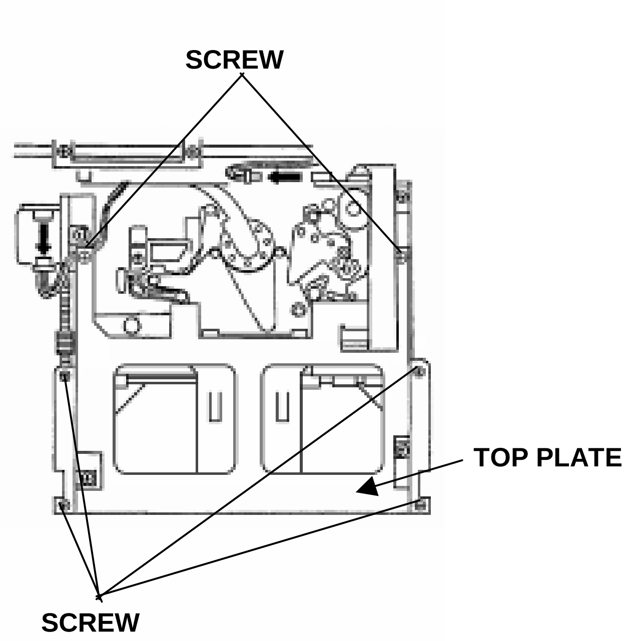
1. Unscrew the 2 screws and remove the Carriage Support Panel on the Front Loading Unit.
2. Disconnect the connector P3 on the Carriage Board of the Front Loading Unit..
3. Unscrew the 6 screws and remove the Top Plate on the Front Loading Unit.
4. Install the VFK1208(black with hole) as shown in figure
5. Connect the Digital Volt Meter to Test point.
6. Place the unit into the no tape loading mode(Refer to No tape loading mode procedure as mentioned as below.
7. Loosen the screw (A) and move the lever (D) with tweezers for adjust the sensor position so that the DC voltage at **TP201** is within specification.

[No tape loading procedures]

Open the SERVO ADJUST menu on the Service Menu. Select the “T REEL TRQ” by cursor key and press SEARCH button on the Front Panel, then loading is started. During adjustment, hold the SEARCH button.

CAUTION: 1. Do not use magnetized tweezers and Screw driver.
2. Do not touch the magnetize Screw driver to S-Reel FG magnet portion, when the lever (D) portion is adjusting.

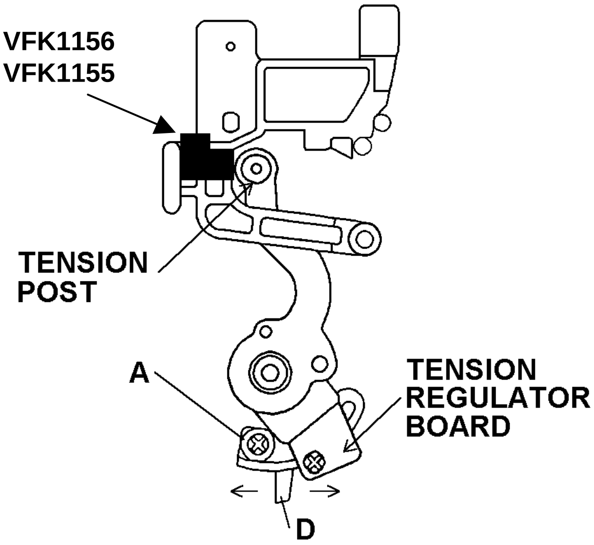


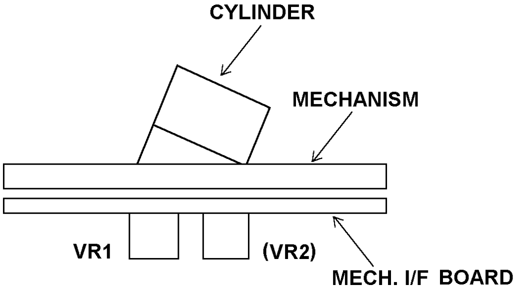


5-8. Tension Arm PLAY and REV voltage adjustment

BOARD	SERVO
SPEC	(PLAY) 3.8 ± 0.05V (REV) 1.2 ± 0.3V
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	VR2(Mech I/F)
MODE	STOP
TOOL	Digital Volt Meter VFK1156(Black:for PLAY position) VFK1155(White:for REV position)

1. Install the VFK1156(black) as shown in figure.
2. Connect the Digital Volt Meter to Test point.
3. Place the unit into no tape loading mode.
4. Adjust the VR2 so that the DC voltage at TP201 is within specification (PLAY).
5. Install the VFK1155 as shown in figure and confirm that the DC voltage at TP201 is within specification (REV).
6. If it out of spec, perform the Neutral Position adjustment again.

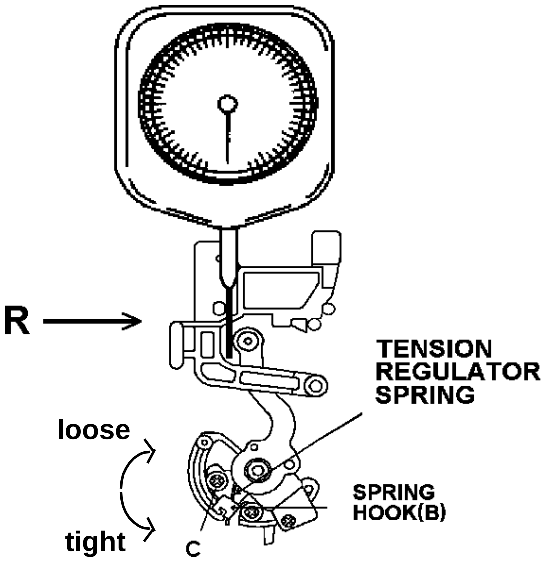

VFK1156
VFK1155
TENSION POST
A
TENSION REGULATOR BOARD
D


CYLINDER
MECHANISM
VR1
(VR2)
MECH. I/F BOARD

5-9. Tension Regulator Spring Adjustment

BOARD	SERVO
SPEC	11 ± 1gf
TEST POINT	TP201(SERVO:F1)
ADJUSTMENT	Tension Regulator Spring hook (B)
MODE	STOP
TOOL	Digital Volt Meter VFK1188(30g Dial Tension Gauge)

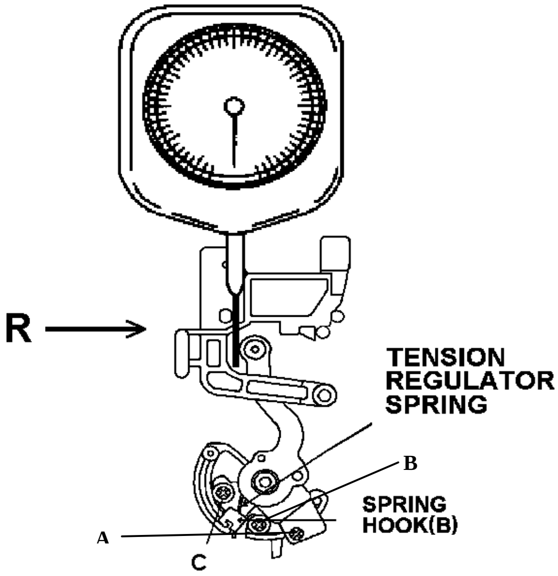
1. Connect the Digital Volt Meter to Test point.
2. Place the VTR into no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP201 is 3.8V (PLAY position)
4. Loosen the screw (C) and adjust the position of hook (B) so that the indication of gauge is within specification.



5-10. REV Tension Confirmation

BOARD	SERVO
SPEC.	18 ± 2gf
TEST POINT	TP201(SERVO:F1)
MODE	STOP
M.EQ	Digital Volt Meter VFK1188(30g Dial Tension Gauge)

1. Connect the Digital Volt Meter to Test point.
2. Place the VTR into no tape loading mode.
3. Insert the tension gauge to push the tension post to the direction R until the voltage at the TP201 is 1.2V (REV position)
4. Confirm that the indication of gauge is within specification. If not, make the Tension Spring Adjustment again.
5. After finish this adjustment , grew the screw A,B and C . The grew quantity at B is half of A and C.

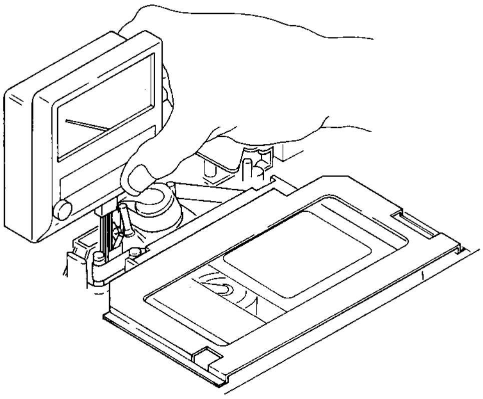


5-11. Tension Confirmation

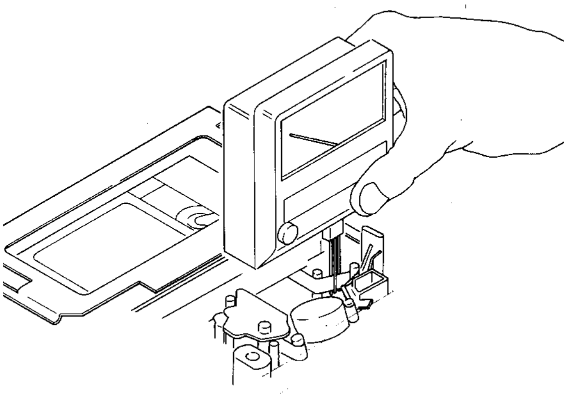
SPEC	(PLAY)6.0 ± 1gf (REV) 9.0 ± 2gf
MODE	PLAY, REV × 1
TAPE	63 min M size Blank Tape
TOOL	VFK1145(Tension Meter)

1. Play back beginning portion of the tape.
2. Insert the tension meter between **S3 post** and **S4 post**.(Refer to figure).
3. Confirm the tension is within specification.
4. Place the unit in REV mode.
5. Insert the tension meter between **S4 post** and **S5 post**.(Refer to figure)
6. Confirm the tension is within specification.

NOTE: Be careful not to give some tape damage.

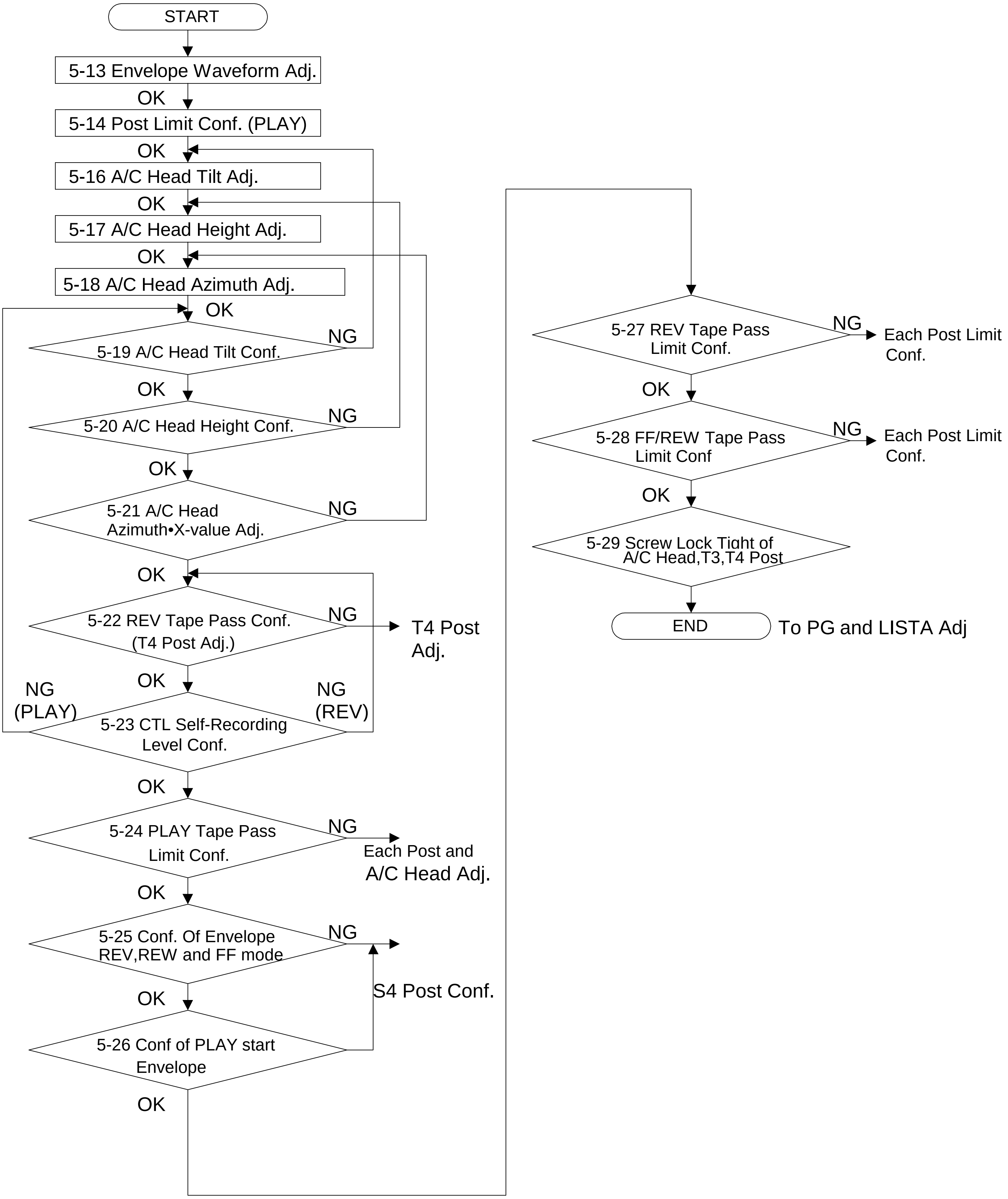


Play Tension



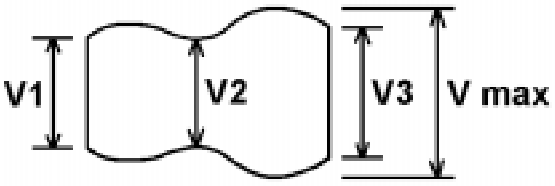
Rev Tension

5-12. Tape Pass Adjustment Procedure


START
5-13 Envelope Waveform Adj.
OK
5-14 Post Limit Conf. (PLAY)
OK
5-16 A/C Head Tilt Adj.
OK
5-17 A/C Head Height Adj.
OK
5-18 A/C Head Azimuth Adj.
OK
5-19 A/C Head Tilt Conf.
NG
OK
5-20 A/C Head Height Conf.
NG
OK
5-21 A/C Head Azimuth•X-value Adj.
NG
OK
5-22 REV Tape Pass Conf. (T4 Post Adj.)
NG
T4 Post Adj.
OK
NG (PLAY)
NG (REV)
5-23 CTL Self-Recording Level Conf.
OK
5-24 PLAY Tape Pass Limit Conf.
NG
Each Post and A/C Head Adj.
OK
5-25 Conf. Of Envelope REV,REW and FF mode
NG
S4 Post Conf.
OK
5-26 Conf of PLAY start Envelope
OK
5-27 REV Tape Pass Limit Conf.
NG
Each Post Limit Conf.
OK
5-28 FF/REW Tape Pass Limit Conf
NG
Each Post Limit Conf.
OK
5-29 Screw Lock Tight of A/C Head,T3,T4 Post
END
To PG and LISTA Adj

5-13. Envelope Waveform Adjustment

SPEC	V1/Vmax, V2/Vmax, V3/Vmax ≥ 0.8
TEST POINT	TP16:R/P ENV (RF AMP Board:H4) TP1 :TRIG/HSW (RF AMP Board:H4)
ADJUSTMENT	S1, T1 Post Height
MODE	PLAY (ATF)
TAPE	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)
M.EQ	Oscilloscope
TOOL	VFK1149(Post Driver)



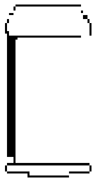
1. Playback the alignment tape.
2. Adjust S1 and T1 post height so that the R/P envelope output is within the specification.
3. When the S1 and T1 posts are adjusted, first raise the post height and make small the entrance and exit side of the envelope, then down the post until envelope becomes flat.
4. With order to adjustment, basically adjust T1 post for makes flat at exit side of envelope first and adjust S1 post.
5. After finish this adjustment, unload the tape and load the tape again, then confirm the shape of Envelope waveform does not changed.

5-14 Post Limit Confirmation (PLAY)

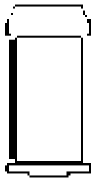
SPEC	Post limit shown in the table No tape curl
MODE	PLAY
TAPE	Blank Tape
TOOL	VFK1149(Post Driver) VFK1151(Nut Driver)

1. Confirm that the tape pass limit follow the as shown as below table and adjust it in case of need.
2. Confirm that the kinds of D, E and F condition do not appeared on the tape as shown in figure.

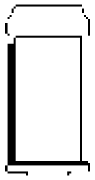
Post	Limit	Adjustment
S5	Lower limit or Free	S5 Post Height
S4	Lower Limit	S4 Post Height
S1	Upper Limit	Envelope waveform
T1	Upper Limit	Envelope waveform
T3	Lower Limit	T3 Post Height
T4	Lower limit or Free	T4 Post Height



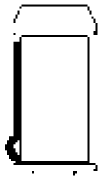
A: UPPER



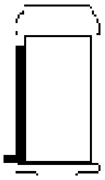
B: FREE



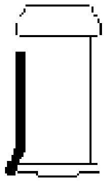
C: LOWER



D: Curl



E: Bend



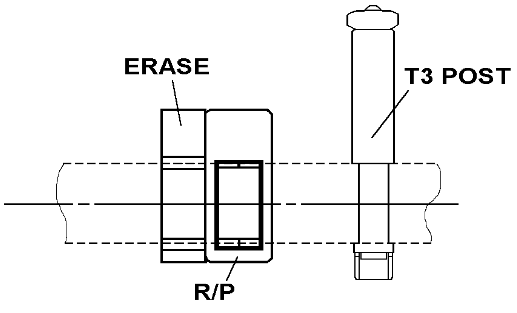
F: Drop

5-15. A/C Head Adjustment Method

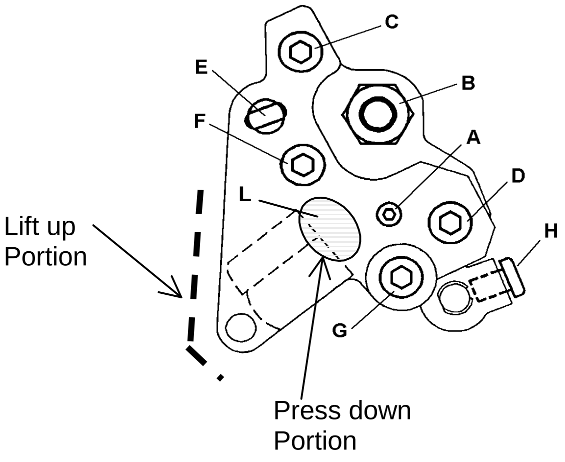
Adjustment Item	SCREW	Adjustment Method	Torque
Tilt adjustment	A	Tighten direction………Decrease CUE Loosen direction……….Increase CUE	
Height adjustment	B	Tighten direction………In case of increase CTL, when A/C Head Press down. Loosen direction………In case of increase CTL, when A/C Head lift up.	
Azimuth adjustment	F	Phase is adjusted by screw F	
X-value adjustment	C D	Adjust X-value by VFK0357 at Hole (E), then tighten the screw (C) and (D) to fix A/C Head horizontal position.	2.5Kg.cm
Fixed Tilt and Azimuth	G	Screw (G) is always tighten during adjustment except Tilt and Azimuth.	1.0Kg.cm
Fixed height	H	After height adjustment, tighten the screw (H) to fix height of A/C Head.	

SCREW	Tool for adjustment
A	VFK1178 (0.89mm Hex Driver)
B	VFK1150 (5.5mm Tool for adjustment)
F	VFK1148 (1.5mm Hex Driver)
C,D,G	VFK1209 (Torque Driver) VFK1375 (1.5mm Post Axis Driver)
H	VFK1190 (1.5mm L type of Hex Wrench)

1. Each adjustment of A/C Head should be perform under the screw (G) tightened.
2. Confirm the screw (A) does not loosen, before execute the A/C Head Tilt adjustment. The screw (A) should be always touch to top of A/C Head.
3. Be careful the tape damage at T3 Post, when adjust tilt of A/C Head.
4. When the height of A/C Head is adjusted by Nut (B), first the screw (H) should be loosen. And after height adjustment finished, tighten the screw (H) lightly.
5. Each adjustment of A/C Head should be finished at the condition of turn the each adjustment screw tighten direction. And hit the portion (L) lightly for remove the distortion.
6. Adjust alternately each A/C Head adjustment with Envelope Waveform adjustment.



A/C HEAD HEIGHT



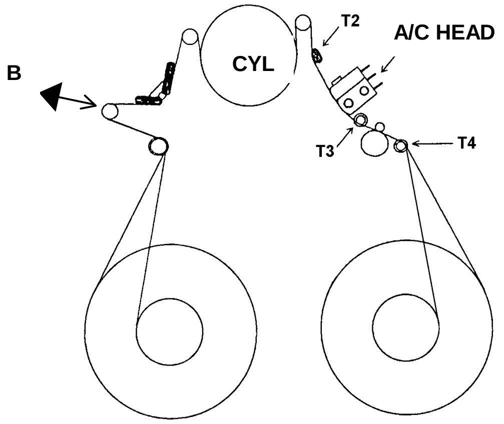
5-16. A/C Head Tilt Adjustment

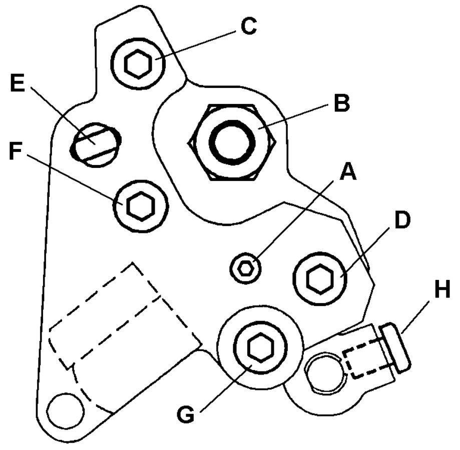
SPEC	Lower limit at T3 Post No tape curl
ADJUSTMENT	SCREW A and G (A/C Head)
MODE	PLAY
TAPE	Blank Tape
M.EQ	VFK1148, VFK1178(Hex Driver)

1. Play back the tape and adjust **screw (A)** for adjustment of tilt of A/C Head so that the tape path has lower limit without curl at T3 post.
2. To adjustment, loosen the screw (G) and make curl on tape at lower flange of T3 post by screw (A). And tighten screw (A) accordingly for find the point of curl disappeared. After finish adjustment for screw (A), tighten the screw (G) is tightened with 1.0Kg/cm of torque.

(NOTE)

1. In case of turn clockwise screw (A).
   → Tape goes up at T3 post.
   In case of turn counter-clockwise screw (A).
   → Tape goes down at T3 post.
2. When screw adjustment finished, with each adjustment screw on A/C Head should be finished tighten direction. And confirm that the screw does not loosen.
3. Adjust and confirmation should be performed alternately with each A/C head adjustment (Azimuth and Height).





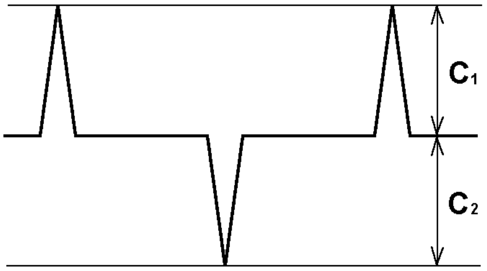
5-17. A/C Head Height adjustment

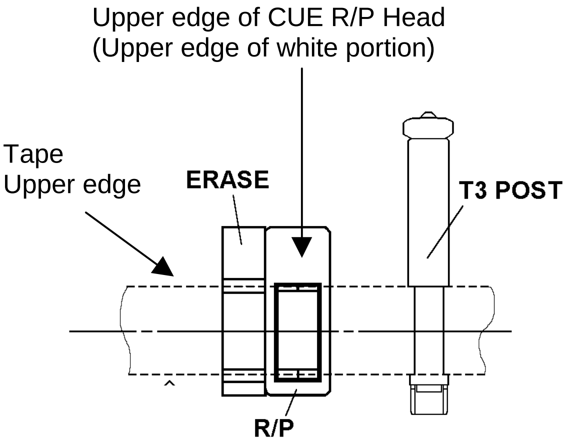
BOARD	SERVO
SPEC	CTL Output (C1,C2 ≥ 1.8V)
TEST POINT	TP30:CTL
ADJUSTMENT	SCREW B and H (A/C Head)
MODE	PLAY
TAPE	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)
M.EQ	Oscilloscope
TOOL	VFK1150(Nut Driver) VFK1190(Hex Wrench)

1. Observe the CTL output (**TP30)** on the Servo board.
2. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the **CTL** output level is **decreased**.
3. If increases CTL output, when press the A/C Head. Loosen the **screw H** and adjust the **screw B counterclockwise** until CTL output is maximized.
4. If increases CTL output, when lift up the A/C Head. Loosen the **screw H** and adjust the **screw B clockwise** until CTL output is maximized.
5. After tightening the **screw H(2.0kg)**, confirm the level again.

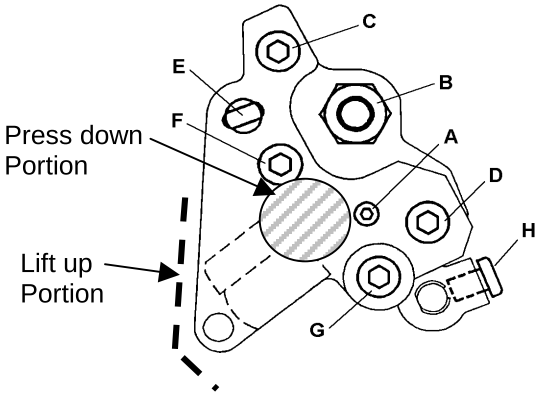
< NOTE >

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).




Upper edge of CUE R/P Head
(Upper edge of white portion)
Tape
Upper edge
ERASE
T3 POST
R/P

A/C HEAD HEIGHT


C
E
B
F
A
Press down
Portion
D
H
Lift up
Portion
G

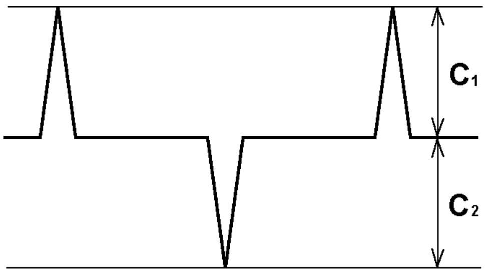
5-18. A/C Head Azimuth Adjustment

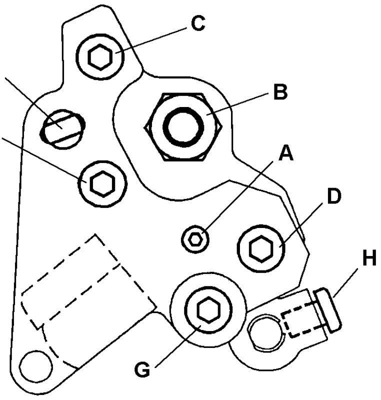
BOARD	SERVO
SPEC	CTL Output:C1,C2 = C1 max, C2 max
TEST POINT	TP30:CTL
ADJUSTMENT	SCREW F (A/C Head)
MODE	PLAY
TAPE	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)
M.EQ	Oscilloscope
TOOL	VFK1148(Hex Driver)

1. Observe the CTL output (TP30) on the Servo Board.
2. To adjustment, loosen the screw (G) and adjust screw (F) so that the CTL output become maximum.
3. Tighten screw (G) with 1.0Kg torque.

< NOTE >

1. Adjust alternately with other A/C head adjustments(Azimuth, Height).

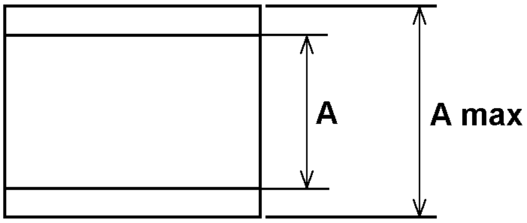


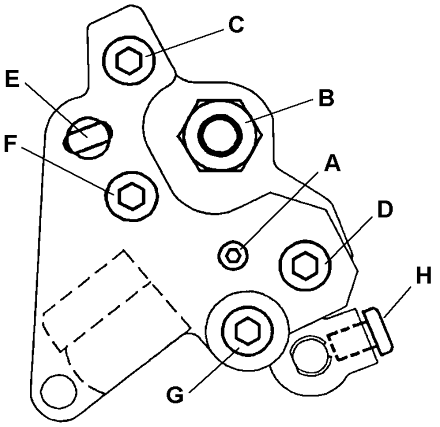


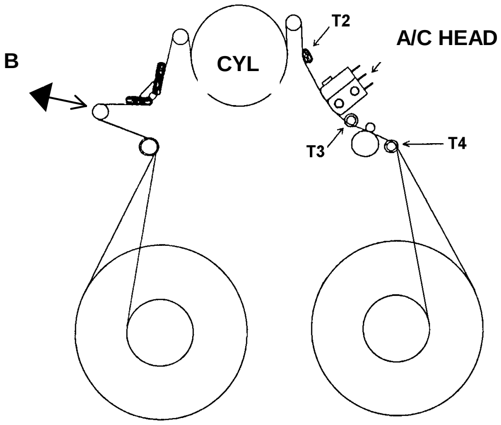
5-19. A/C Head Tilt Confirmation

SPEC	A/Amax ≥ 0.8
TEST POINT	TP101:CUE AUDIO (CUE Board:H2)
ADJUSTMENT	SCREW A and G (A/C Head)
MODE	PLAY
TAPE	NTSC:VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)
M.EQ	Oscilloscope
TOOL	VFK1178, VFK1148(Hex Driver)

1. Playback the Alignment tape.
2. Confirm that the **screw G** and **H** are not loosened.
3. Push the tension arm follow the arrow (B) direction as shown in figure as range of T2 post does not move. And confirm that the CUE output level is within specification.
4. If out of specification, loosen the **screw G** and adjust the **screw A**, then tighten the **screw G** with **1.0kg** torque.
5. The final touch of the adjustment must be turned clockwise. After this adjustment, confirm that the screw A is not loosened.
6. If adjust the screw A, Confirm that the tape pass condition follow Post Limit Confirmation procedure (item 1-14).



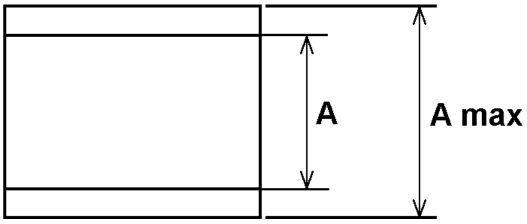


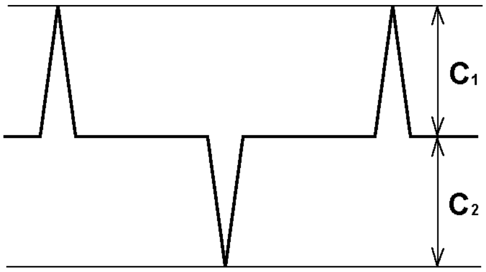


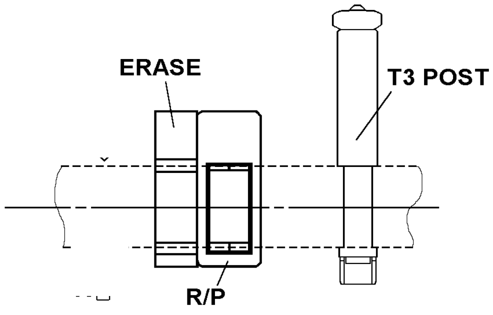
5-20. A/C Head Height Confirmation

SPEC	A ≥ 0.95 × Amax, C1, C2 ≥ 1.8V
TEST POINT	TP101 CUE AUDIO (CUE Board:H2) TP30 CTL (SERVO Board:F1)
ADJUSTMENT	SCREW B and H (A/C Head)
MODE	PLAY
TAPE	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)
M.EQ	Oscilloscope
TOOL	VFK1150 (Nut Driver) VFK1190 (Hex Wrench)

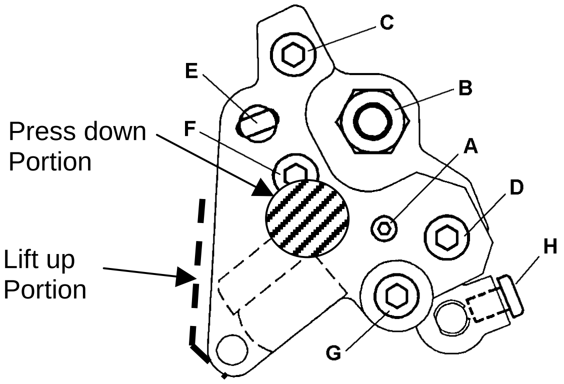
1. Playback the Alignment tape.
2. Press and Lift up to A/C Head lightly as indicated as figure position, then confirm that the CUE output level at TP101 does not in**creased**.
3. If increases CUE output, A/C Head Height adjustment performed. And also confirm that the CTL output level.
4. If adjust the height of A/C Head, Azimuth also changed. Therefore adjust and confirm alternately Height and Azimuth of A/C Head.
5. After screw (H) is tightened, height and tilt of A/C Head are changed. Therefore confirmation of specification must be done after tightening the screw (H).







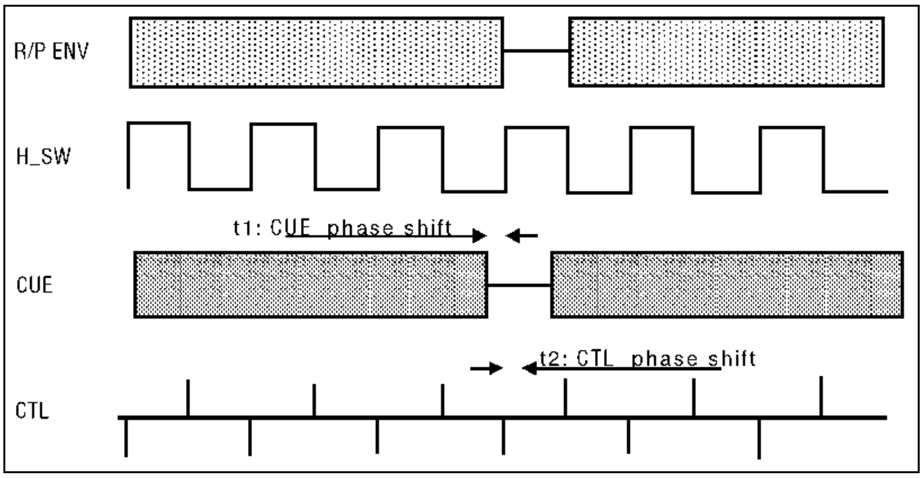
A/C HEAD HEIGHT

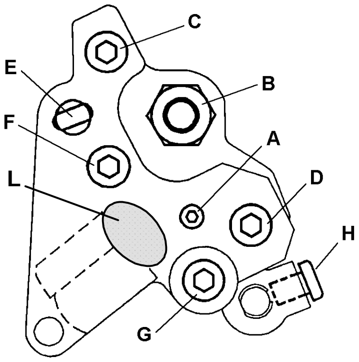


5-21. A/C Head Azimuth and X-value Adjustment

SPEC.	As shown in below figure. 250us ≤ t1, t2 ≤ +250us	**TEST POINT**	TP16 :RP ENV (RF AMP Board:H4) TP233: RP HSW (SERVO Board:F1) TP101: CUE AUDIO (CUE Board:H1) TP30: CTL (SERVO:F1)
ADJUSTMENT	A/C Head each screws		
MODE	PLAY SERVO ADJUST: A07:RP LINEAR P	**M.EQ**	Oscilloscope
TAPE	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)	**TOOL**	VFK0357 (Eccentric Screwdriver)

1. Open the Service menu and select the item “A07: RP LINEAR P” on Servo Adjust menu for RP Head ATF Playback.
2. Playback the X-value Alignment tape.
3. Confirm that the phase of CUE and CTL are within specification against RP HSW pulse trigger. If not perform the X-value adjustment follow the below procedure.
4. Adjust A/C Head Azimuth (refer to Azimuth adjustment procedure) so that the CTL and Lack part of CUE (t2) is match in the phase.
5. Confirm the lack track of envelope, and select the HSW correspond with it (The lack track is correspond HSW high with L ch).
6. Adjust X-value so that the reference of HSW and CTL trigger (CTL falling edge is the reference: refer to below figure) are match in the phase (t1). To adjust X-value, loosen the screw C and D, adjust the hole E by VFK0357. After adjustment tighten the screw C and D with 2.5Kg torque. At this time adjust the phase simultaneously with Azimuth so that the CTL and CUE phase is kept.
7. Hit the top plate (portion L as shown in below figure) of A/C Head lightly by a pointed end of Eccentric driver, then confirm the phase is not shifted finally.





5-22. REV Tape Pass Confirmation and Adjustment (T4 post height adjustment)

SPEC.	C1, C2 ≥ Cp1, Cp2 × 0.75 Lower limit at T3 post on REV mode	**TAPE**	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)
TEST POINT	TP30(SERVO:F1)	**M.EQ**	Oscilloscope
ADJUSTMENT	T4 post height	**TOOL**	VFK1151(Nut Driver)
MODE	REV × 1		

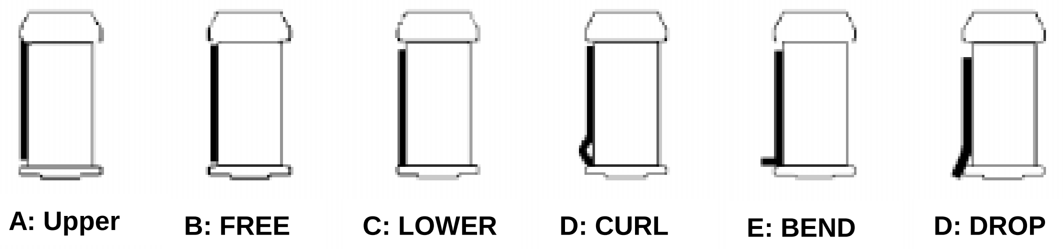
1. Place unit into REV mode, and confirm the post limit and CTL signal are in the specification. IF not, adjust T4 post follow the below procedure.
2. Turn the Nut of T4 post clockwise or counterclockwise follow the tape limit condition at T3 post. The maximum rotation angle is 90 degree.
3. Place unit into REV X1 mode and confirm the CTL output level is become more than 75% on play mode. Confirm the tape pass limit become lower limit at T3 post and the tape does not have curl at T3 and T4 post.
4. However out of specification, adjust T4 post height follow the Post Height Pre-adjustment procedure.

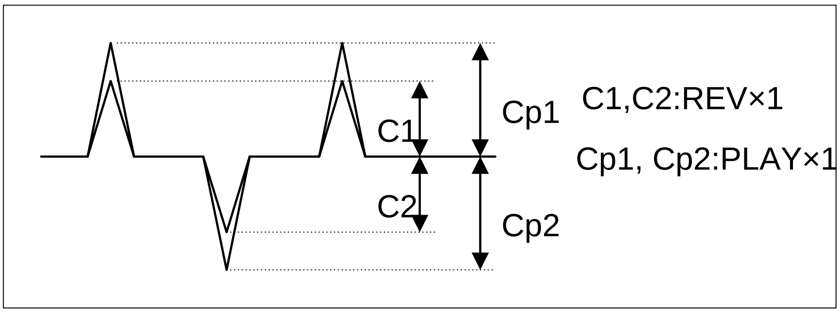
T4 Nut adjustment direction

Direction of adjustment nut of T4 post	CTL level on REV mode	Lower limit at T3 post On REV mode
Tighten direction	Increase	Tape touch to strong
Loosen direction	Decrease	Tape touch to weak

Post Limit

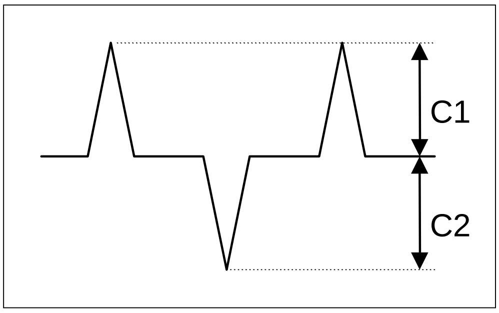
Post Name	Tape limit					
	A	B	C	D	E	F
T3 Post	×	×	○	×	×	×
T4 Post	○	○	○	×	×	×





5-23. CTL Self Recording Level Confirmation

SPEC.	Refer to below table
TEST POINT	TP30 (SERVO Board)
MODE	REC and PLAY
TAPE	Blank tape
M.EQ	Oscilloscope



NOTE: This confirmation should be done after each screws of A/C Head are fixed.

1. Record the blank tape.
2. Playback the recorded portion and confirm the CTL level is within specification as shown as below table on PLAY and REV X1 mode.

CTL Output Level C1,C2

PLAY	REV × 1	REV × 0.2
C1,C2 ≥ 1.8V	C1,C2 ≥ 1.4V	C1,C2 ≥ 1.2V

CTL Output Level C1,C2

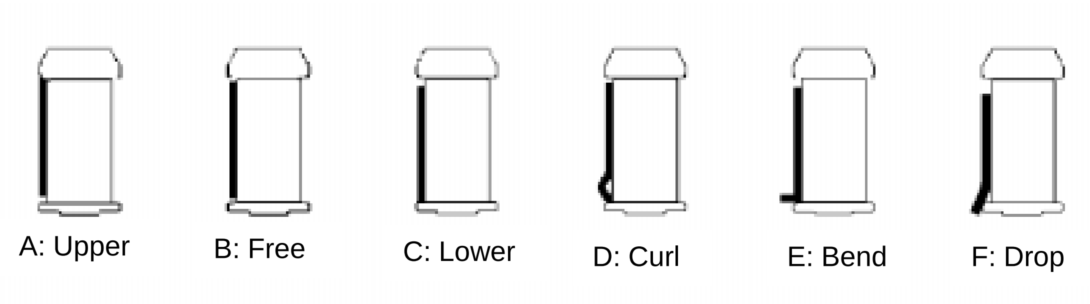
1. PLAY NG → Re-confirm the A/C Head height adjustment.
2. REV NG → Re-confirm the T4 post adjustment.

5-24. PLAY Tape Pass Limit Confirmation

SPEC.	Each Post limit shown in table
MODE	PLAY
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit (Refer the figure)						Adjustment	
	A	B	C	D	E	F		
S5 post	×	○	○	×	×	×	S4, S5 Post	Post Height Pre-Adj.
S4 post	×	×	○	×	×	×		
S1 post	○	×	×	×	×	×	S1 Post	Envelope waveform Adj.
T1 post	○	×	×	×	×	×	T1 Post	Envelope waveform Adj.
T3 post	×	×	○	×	×	×	A/C Head tilt	A/C Head tilt Adj.
T4 post	×	○	○	×	×	×	T4 Post	Post Height Pre-Adj

1. Place unit into PLAY mode and confirm the each post limits is within specification.
2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).

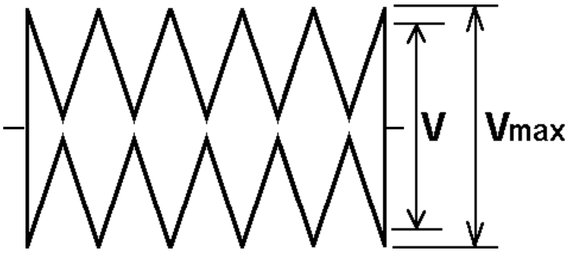

A: Upper B: Free C: Lower D: Curl E: Bend F: Drop

5-25. Confirmation of Envelope on REV,REW and FF mode.

SPEC.	V/Vmax ≥ 0.9
TEST POINT	TP16 :RP ENV (RF AMP Board:H4)
MODE	REV, REW, FF
TAPE	**NTSC:** VFM3582KM (X-value) PAL**:** VFM3682KM (X-value)
M.EQ	Oscilloscope

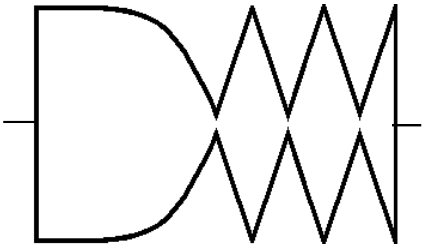
1. Confirm that the Envelope waveform becomes in the specification on REV,REW and FF mode as refer to figure and below.
   - Waveform must be Diamond Style.
   - All the peak level must be more than 90% of maximum level.

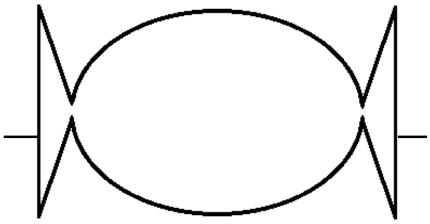
     V/Vmax ≥ 0.9
2. If out of spec, adjust S4 post height.



OK

NG





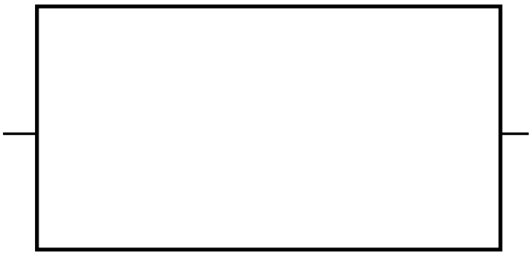
5-26. Confirmation of Play Start Envelope

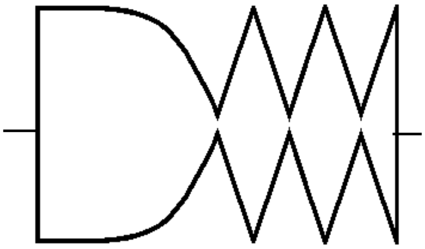
TEST POINT	TP16:RP ENV (RF AMP Board:H1)
MODE	REW/REV → PLAY Loading completion → PLAY FF → PLAY
TAPE	L cassette (123 min, Recorded tape) Tape beginning portion
M.EQ	Oscilloscope

Note: This adjustment must be done after Envelope Waveform Adjustment.

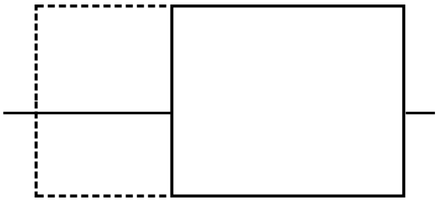
1. Confirm that the envelope appears immediately, when the mode is changed from REW to PLAY, REV to PLAY, FF to PLAY, and Lording to PLAY mode.
2. If out of spec, adjust S4 post height.

OK





NG

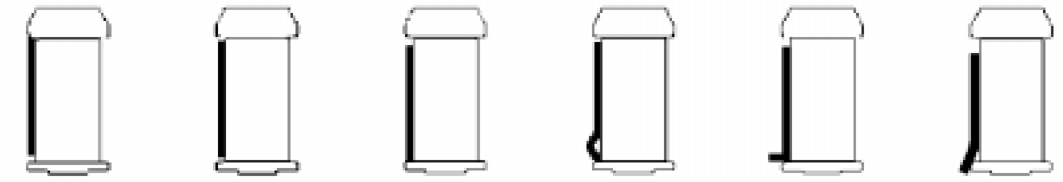


5-27. Tape Pass Limit Confirmation

SPEC	Each Post limit shown in table.
MODE	REV
TAPE	M cassette (MP tape) tape. Tape beginning and end portion

Post Name	Tape Limit(Refer to figure)					
	A	B	C	D	E	F
S5 Post	○	○	○	×	×	×
S4(Tension) Post	×	○	○	×	×	×
S1 Post	○	×	×	×	×	×
T1 Post	○	○	○	×	×	×
T3 Post	×	×	○	×	×	×
T4 Post	×	×	○	×	×	×

1. Place unit into REV mode and confirm the each post limits is within specification.
2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).

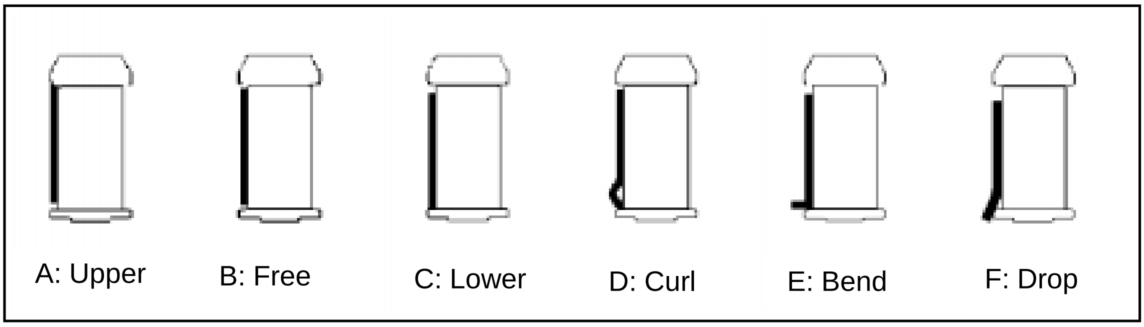

A: Upper B: Free C: Lower D: Curl E: Bend F: Drop

5-28. FF, REW Tape Pass Limit Confirmation

SPEC.	Each Post limit shown in table.
MODE	FF, REW
TAPE	M cassette (MP tape) tape.　Tape beginning and end portion

Post Name	Tape Limit (Refer to figure)					
	A	B	C	D	E	F
S5 Post	○	○	○	×	×	×
S4 (Tension) Post	×	○	○	×	×	×
S1 Post	○	×	×	×	×	×
T1 Post	○	○	○	×	×	×
T3 Post	○	○	○	×	×	×
T4 Post	○	○	○	×	×	×

1. Place unit into FF and REV mode and confirm the each post limits is within specification.
2. If out of specification, adjust the post height follow the each adjustment procedure (Refer to above table).

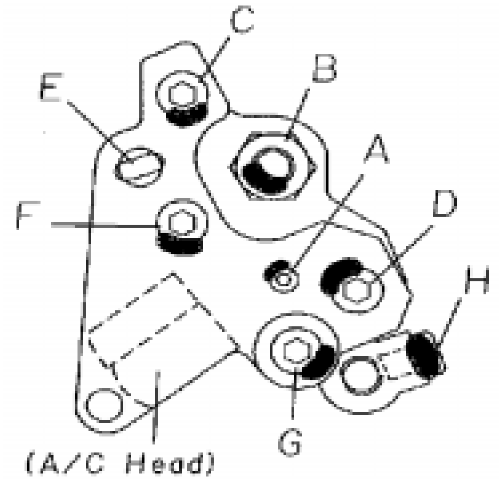


5-29. Screw Lock Tight of A/C Head and T3, T4 Post

[Screw Lock Tight of A/C Head]

	SCREW A	OTHER SCREW
Lock Tight Grew Quantity	1/3 of the screw	1/3 of the screw

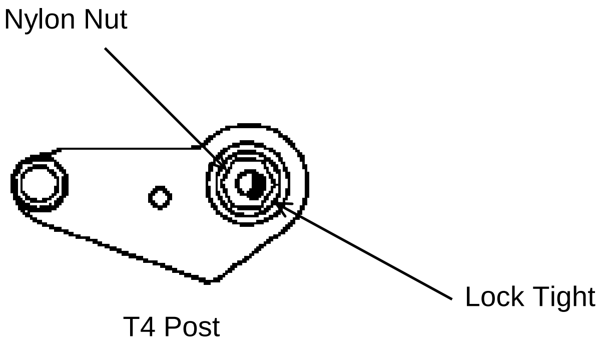
1. Fix the screw by the Lock Tight Grew after adjustment..
2. Before adjustment melt the Grew.



[Screw Lock Tight of T3 and T4 Post]

	T3 Post	T4 Post
Lock tight grew quantity	1/4 of the screw	1/4 of the screw

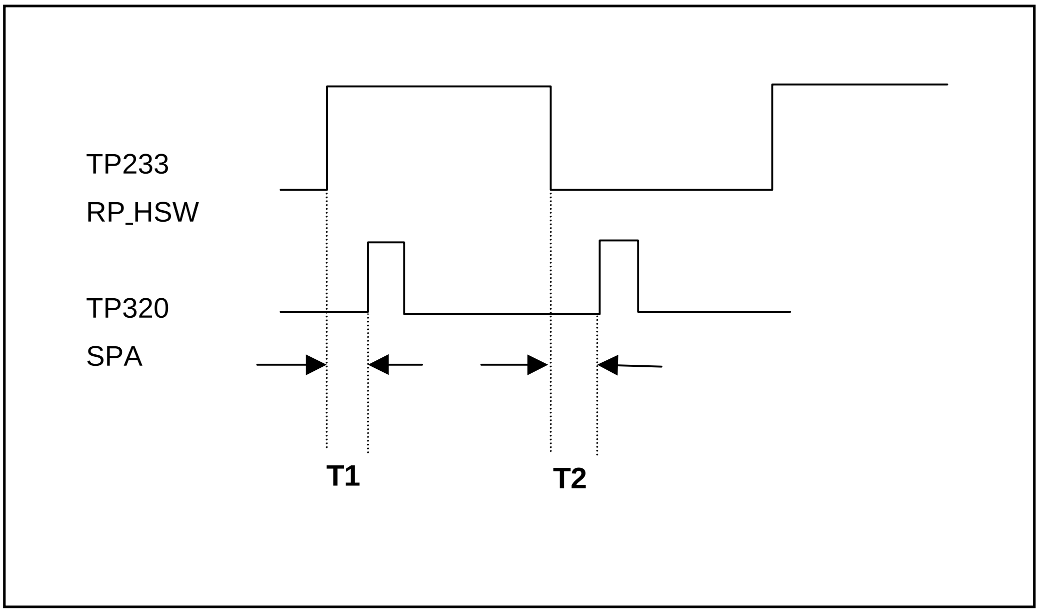
1. After adjustment, attach the lock tight grew at the Nylon nut..
2. Before adjustment, melt the Grew.



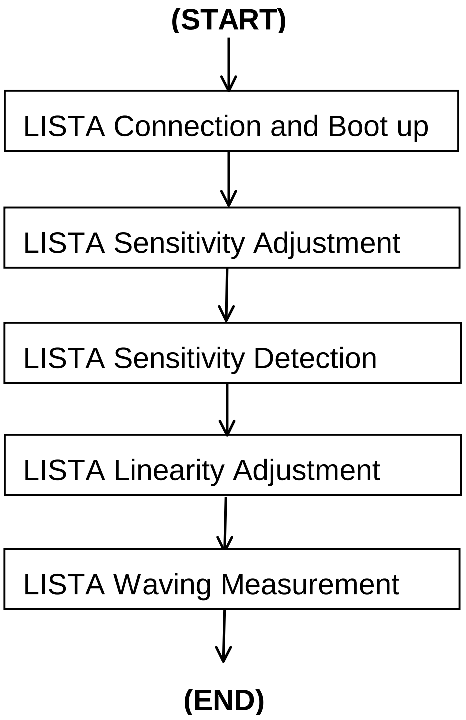
5-30. PG SHIFTER Adjustment

SPEC.	T1, T2 = 126.4µsec ± 2µsec.
MODE	PLAY
TEST POINT	TP320 SPA (SERVO Board:F1) TP233 R/P HSW (SERVO Board:F1)
ADJUSTMENT	A01:PG SHIFTER (EVR on SERVO ADJUST menu)
M.EQ	Oscilloscope
TAPE	**NTSC:** VFM3582KM (X-value) **PAL:** VFM3682KM (X-value)

1. Open the SERVO ADJUST menu on the Service menu and select the item "A01:T PG SHIFTER".
2. Playback the Alignment tape.
3. Press the SEARCH button and keep it until the numerical value of "A01:PG SHIFTER" are renewed.
4. Connect the scope toTP233 and TP320. Trigger the scope by TP233. Then it is displayed as shown in figure.
5. Confirm that the period of T1 and T2 in specification (126.4µsec ± 2µsec).



5-31. LISTA Adjustment Procedure.


(START)
LISTA Connection and Boot up
LISTA Sensitivity Adjustment
LISTA Sensitivity Detection
LISTA Linearity Adjustment
LISTA Waving Measurement
(END)

5-32. LISTA Connection and Boot Up

TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 PB HSW (SERVO Board:F1) TP232 R/P HSW (SERVO:Board:F1) TG510 GND (SERVO Board:F1)
M.EQ	P/C (AD Board should be installed), Oscilloscope
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape) **PAL:** VFM3681KM (LISTA alignment tape)
TOOL	VFK1481(LISTA Software), VFK1186(LISTA Cable)

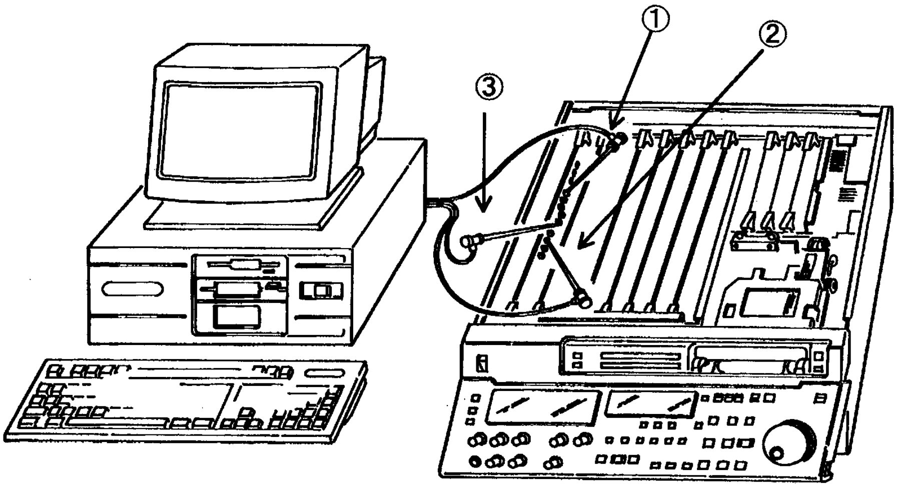
1. Connect the LISTA Cable to A/D board on PC.
2. Connect the Clips of LISTA Cable to test point on Servo Board as follow as below.

①.ATF: 321 (ATF error)

②.HSW: 233 (HSW:RP) or TP232 (HSW:PB)

③.GND: 510 (GND)

CONNECTION



3. Boot up the LISTA software on DOS mode.

☆ Install and Boot up.

All files on the floppy disk (VFK1481) copy to created directly on PC(**i.e.** C:¥LISTA).

Type “LISTA” and press ENTER Key, then boot up the LISTA software VFK1481

4. Select the item “DVCPRO” for format select on the menu.
5. Select the item “AJ-D850" for selected model on the menu.(AJ-D850 is equivalent to AJ-D850)
6. After selected model, appeared alignment tape data on the screen for select the Serial number on the alignment tape. But if LISTA software have not resisted data of alignment tape, press the ESC key, then main menu is display on the screen. And select item “<4> Alignment Tape” for entry the data on the attachment sheet, which is enclosed of alignment tape.

< How to Entry the Attachment Data of Alignment Tape >

1. Select the item “<4> Alignment Tape“ on the main menu of the LISTA software.
2. Select the item “<2> ENTRY” on the alignment tape menu.
3. After display the screen of “<<Alignment tape Data Entry>>“, first input the Serial number follow the printed number on the tape label. And input the number “0” or “1” for select the PAL/NTSC. And after that for entry the tape type, in case of DVCPRO input to “0”, in case of DV input to “1”.
4. After select the Tape type, the frame for input the DATA and CHECK SUM appeared on the screen. Input the numerical value in numerical order on the data sheet, which are enclosed with alignment tape. If input the wrong number, appear the error message on the screen, then confirm that the data on the sheet.
5. After entry the data, select “ <1> SELECT “ on the Alignment Tape menu and select the serial number of the alignment tape.

<<Alignment Tape Data Entry>>   Serial No.0596003(NTSC)   18um

[1]	- 0.1
[2]	0.1
[3]	0.0
[4]	0.2
[5]	0.6
[6]	0.5
[7]	0.7
[8]	0.9
[9]	1.0
[10]	0.8

[11]	0.7
[12]	1.0
[13]	0.7
[14]	0.5
[15]	0.2
[16]	- 0.5
[17]	- 0.3
[18]	- 0.3
[19]	- 0.1
[20]	- 0.6

[21]	- 0.4
[22]	- 0.2
[23]	- 0.7
[24]	- 0.6
[25]	- 0.7
[26]	- 0.3
[27]	- 0.4
[28]	- 0.4
[29]	- 0.6
[30]	- 0.3

[31]	- 0.4
[32]	- 0.6
[33]	- 0.3
[34]	- 0.2
[35]	- 0.1
[36]	- 0.3
[37]	- 0.1

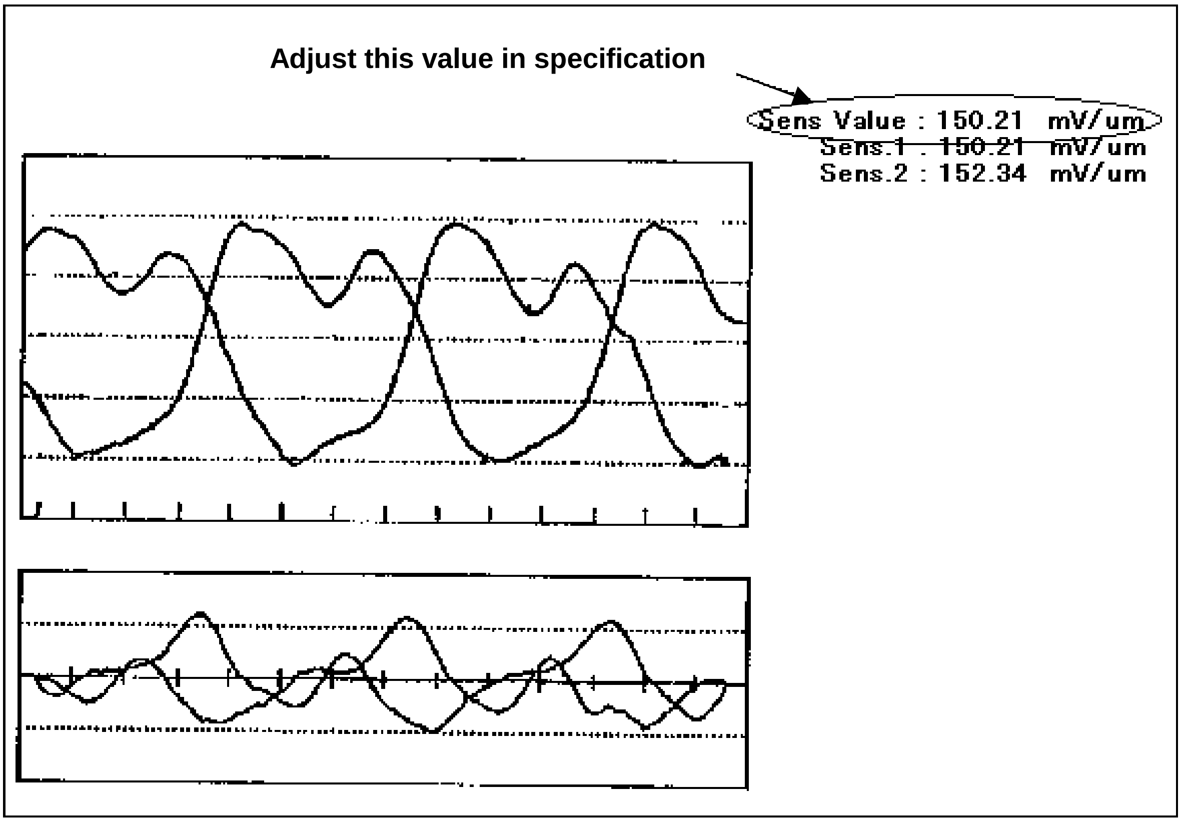
[CS]	- 0.6

5-33. LISTA Sensitivity Adjustment (R/P Head)

SPEC.	Sensitivity:150 ± 15 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 R/P HSW (SERVO Board:F1) TG510 GND(SERVO Board:F1)
ADJUSTMENT	A06:RP GAIN P (SERVO ADJUST)
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape) **PAL:** VFM3681KM (LISTA alignment tape)

Note: Before perform the Sensitivity adjustment, perform the PRE-EQ adjustment for adjust ENV Level (L/R) on RF AMP (H4) Board.(Refer to Sec. 4 :electrical adjustment).

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR “ A06:RP GAIN P ”.
3. Playback the LISTA alignment tape.
4. Select the **“<6> ATF Error Signal Monitor” on** the LISTA main menu and after appear the message “1.2% Speed…“, press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR “ RP GAIN P “ so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.



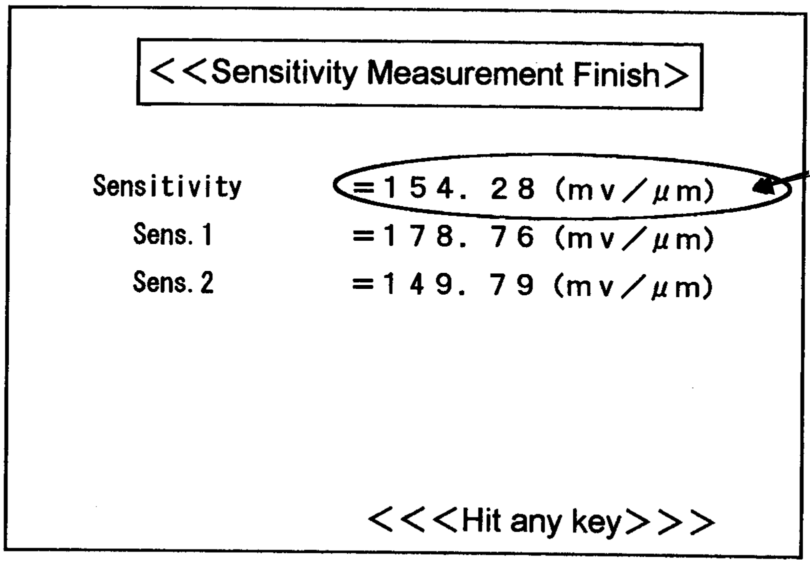
Adjust this value in specification

```
Sens Value : 150.21  mV/um
    Sens.1 : 150.21  mV/um
    Sens.2 : 152.34  mV/um
```

5-34. LISTA Sensitivity Detection (RP Head)

SPEC	Sensitivity:150 ± 15 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO P.C.Board:F1) TP233 R/P HSW (SERVO P.C.Board:F1) TG510 GND(SERVO P.C.Board:F1)
ADJUSTMENT	------
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape) **PAL:** VFM3681KM (LISTA alignment tape)

1. Open the SERVO ADJUST menu on Service menu and select the EVR “A06:RP GAIN P“.
2. Playback the LISTA alignment tape.
3. Select the “**<1>Sensitivity Measurement”** on the LISTA main menu and after appear the message “1.2% that Speed…“, press ENTER key, then LISTA software start measurement of sensitivity value.
4. Confirm the sensitivity value is within specification, when the message <<Sensitivity Measurement Finish>> and “Sensitivity = numerical value” are displayed on the screen.
5. If out of specification, repeat the steps 3 and 4.
6. If still out of specification, perform the “LISTA Sensitivity Adjustment” again.



```
<<Sensitivity Measurement Finish>

Sensitivity     =154.28 (mv／μm)
  Sens.1        =178.76 (mv／μm)
  Sens.2        =149.79 (mv／μm)




                 <<<Hit any key>>>
```

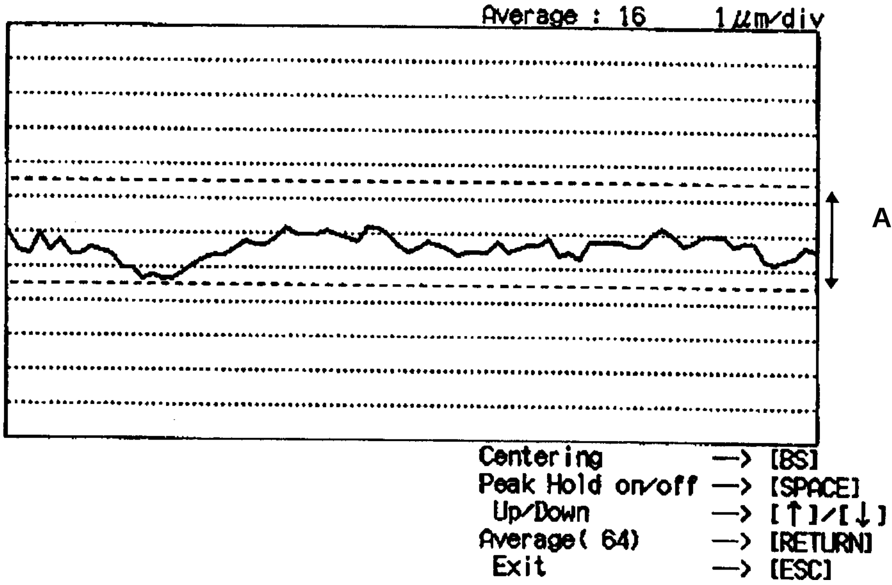
Confirm this value

5-35. LISTA Linearity Adjustment and Waving Measurement.

SPEC	Linearity: Less than 3um, Waving: Less than 1.5um
MODE	PLAY (EVR is select to “ A07: RP LINEAR P “)
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 R/P HSW(SERVO Board:F1) TG510 GND (SERVO Board:F1)
ADJUSTMENT	S1 and T1 Post Height
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape) **PAL:** VFM3681KM (LISTA alignment tape)

1. Open the SERVO ADJUST menu on Service menu and select the EVR “ A07: RP LINEAR P “
2. Playback the LISTA alignment tape.
3. Select the item “(2) Linearity Measurement“ on the LISTA main menu and display the linearity waveform.
4. When the waveform as shown as below figure is displayed on the screen, press the “BS (back space)” key for display the waveform to center of scale on the screen. And adjust height of S1 and T1 post by Post Driver so that the linearity waveform is become flat as possible, and it should be in the specification.

☆ Adjust linearity waveform in the red dot line on the screen.



Adjust linearity into this area

✪ **POINT:**

The part of left side of waveform(entrance side) is adjusted by height of S1 post and part of right side of waveform(exit side) is adjusted by height of T1 post.

Lower part of above waveform of figure is displayed lead on Cylinder.

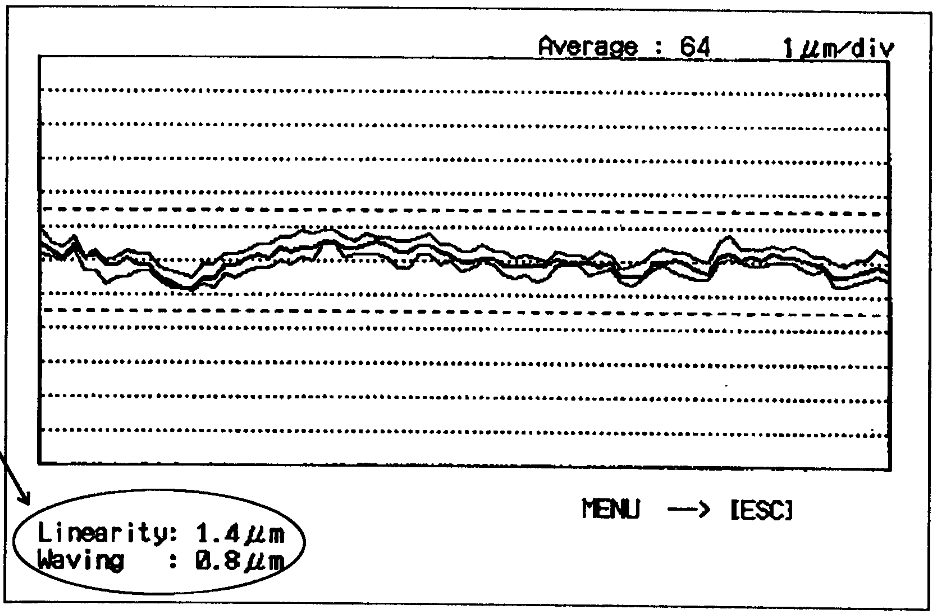
When the post driver is remove from upper part of post, linearity waveform is changed.

After finish this adjustment, eject the tape and insert the tape again for confirm the shape of linearity waveform does not changed.

5. After finish the linearity adjustment, measure the numerical value of linearity and waving.

* [Waving Measurement]

1. Press “SPACE” key for make the Peak Hold during 30 seconds, when linearity is displayed.
2. After finish the Peak Hold, press “SHIFT” and “}” key simultaneously on the Key Board, then display the numerical values of “Linearity” and “Waving” on left lower portion of screen. And confirm the numerical values are in the specification. Also confirm the range of waving waveform is same quantity from entrance side to exit side. If the “Linearity” and “Waving” are out of specification and it caused by not enough limit of entrance or exit side of envelope, then adjust height of S1 and T1 post.
3. After this measurement is finished, press ESC key for return to main menu.



```
Average : 64      1µm/div

Linearity: 1.4µm
Waving   : 0.8µm
```

Confirm this
Value

*NOTE: Saving of LISTA Data

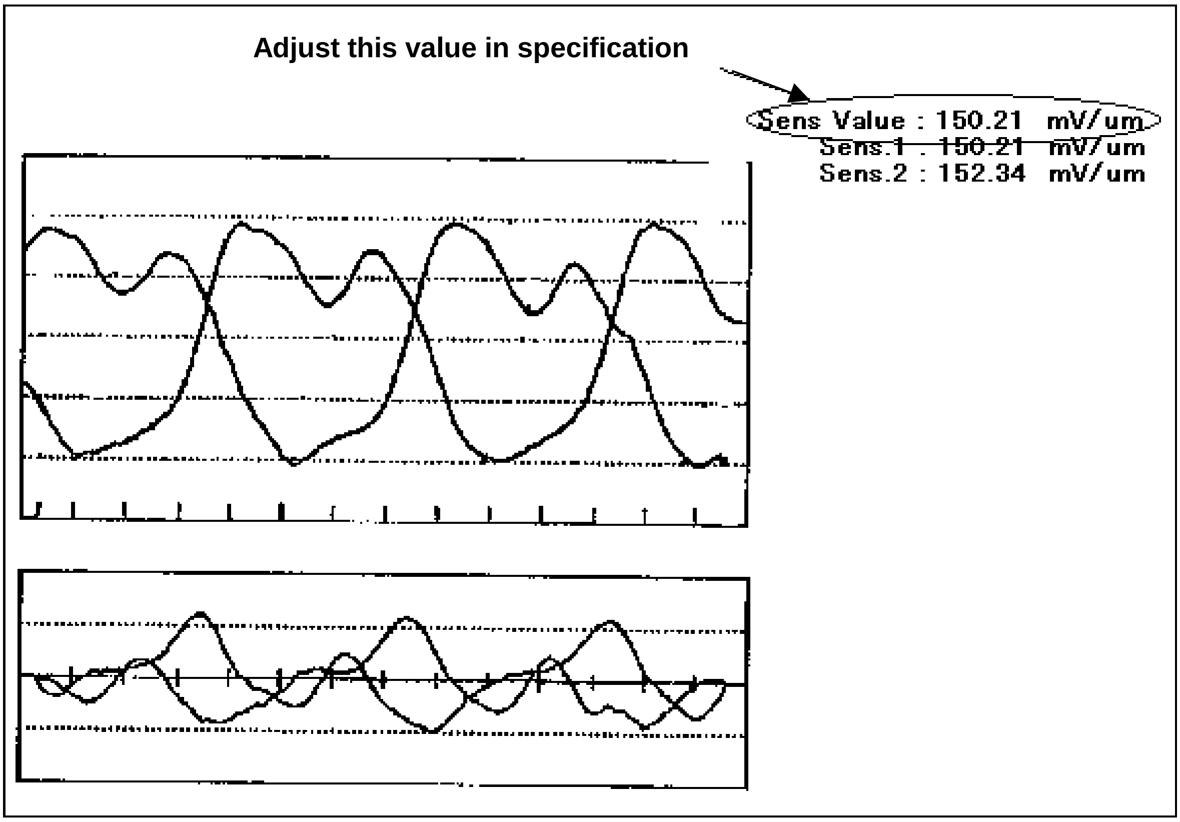
The LISTA software can be saved linearity waveform and measurement value of linearity and waving as one file data to PC.

1. Basically this operation should be performed after linearity and waving measurement finished.
2. Select the item “(3) Data Save/Load” on the LISTA main menu. And after open the menu select the item “<1> Save”.
3. The linearity waveform as Peak Hold displayed on the screen. And after appeared message “File Name?” on the screen, entry the File Name and Comment. File Name must be in 8 characters, and comment is must be in 20 characters. As comment, entry the Serial Number, VTR Model Number and Head Rotation Hours etc, for use management of linearity data of each VTR.
4. After completion of saving, select the item “<2> Load” on the “(3) Data Save/Load” menu, then appear the saved File Name on the screen. And select it previous saved file for confirm the waveform and numerical value displayed correctly. By press “SHIFT” and “}”, key simultaneously on the Key Board, then display the numerical values of “Linearity” and “Waving” on left lower portion of screen.

5-36. LISTA Sensitivity Adjustment (PB HEAD)

SPEC.	Sensitivity:150 ± 15 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP232 PB HSW(SERVO Board:F1) TG510 GND (SERVO Board:F1)
ADJUSTMENT	A04:PB GAIN P
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape) **PAL:** VFM3681KM (LISTA alignment tape)

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR “A04:PB GAIN P”.
3. Playback the LISTA alignment tape.
4. Select the “**<6> ATF Error Signal Monitor” on** the LISTA main menu and after appear the message “1.2% Speed…“, press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR “A04 PB GAIN P“ so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.



Adjust this value in specification

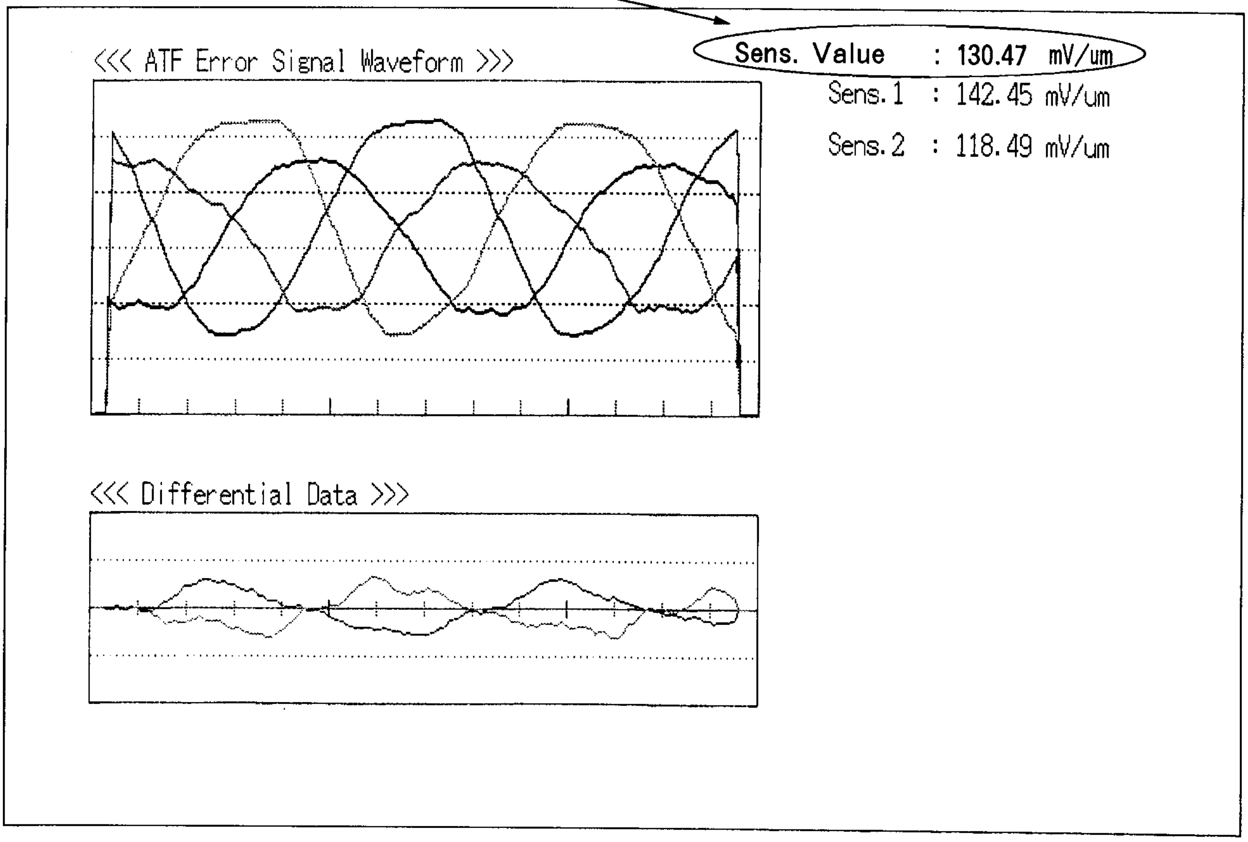
```
Sens Value : 150.21  mV/um
Sens.1 : 150.21  mV/um
Sens.2 : 152.34  mV/um
```

5-37. LISTA Sensitivity Adjustment (DV Compatibility)

SPEC.	Sensitivity:130 ± 30 (mV/um)
MODE	PLAY
TEST POINT	TP321 ATF ERR (SERVO Board:F1) TP233 PB HSW(SERVO Board:F1) TG510 GND (SERVO Board:F1)
ADJUSTMENT	A08:RP GAIN
TAPE	**NTSC:** VFM3581KM (LISTA alignment tape) **PAL:** VFM3681KM (LISTA alignment tape)

1. Connect the Test Point to clip of LISTA cable for ATF Error signal measurement.
2. Open the SERVO ADJUST menu on Service menu and select the EVR “ A08:R/P GAIN ”.
3. Playback the LISTA alignment tape.
4. Select the “**<6> ATF Error Signal Monitor” on** the LISTA main menu and after appear the message “1.2% Speed…“, press ENTER key, then sensitivity value as real time and waveform appear on the screen as shown as figure below.
5. Adjust EVR “A08 R/P GAIN“ so that the sensitivity value is within specification.
6. After finish this adjustment, press ESC key to exit to the main menu.

Adjust this value in the specification



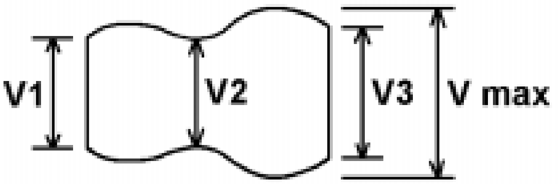
<<< ATF Error Signal Waveform >>>

Sens. Value : 130.47 mV/um
Sens.1 : 142.45 mV/um
Sens.2 : 118.49 mV/um

<<< Differential Data >>>

5-38. Self-Recording Playback Envelope Waveform Confirmation

SPEC	V1/Vmax, V2/Vmax, V3/Vmax ≥ 0.8
TEST POINT	TP16:R/P ENV (RF Board:H4) TP1 :TRIG/RP HSW (RF Board:H4)
ADJUSTMENT	S1 and T1 Post Height
MODE	PLAY
TAPE	Blank Tape
M.EQ	Oscilloscope
TOOL	VFK1149(Post Driver)



1. Record the color bar signal.
2. Play back the recorded portion and confirm that the envelope output is within specification
3. If out of specification, perform the Envelope Waveform and LISTA adjustment again.

.

6. Mechanical Parts Replacement and Adjustment Procedures

GENERAL

When mechanical parts are replaced, pay attention to the following notes.

1. Turn power off before replacing any part.
2. If any adjustment is required after replacing parts, perform the required adjustments.
3. Use proper fixture tools.
4. Make sure to clean the parts after replacement, Also when the mechanical parts are replaced, follow the replacement procedure.

6-1. Cylinder Unit Replacement

(Removal)

1. Remove the T1 Guide and Cleaning Arm Unit (Refer to item 11-8).
2. Disconnect the connector P5002 and P5003 on the Head Buffer board. And remove the screw, which is fixed with flexible cable.

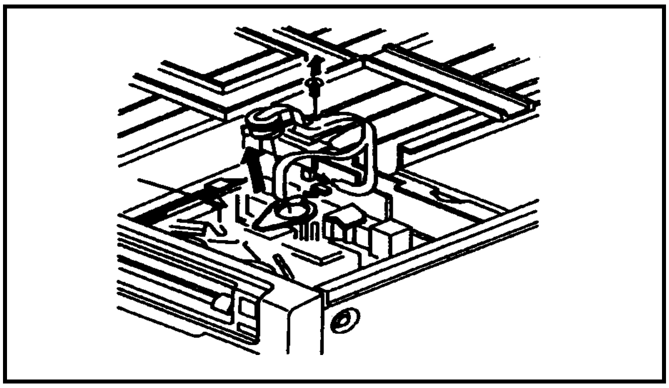


Fig. 6-1-1

Note: Be careful when removing the flexible cable from the connector. Refer to the way to remove the connector as shown in Figure 6-1-2.

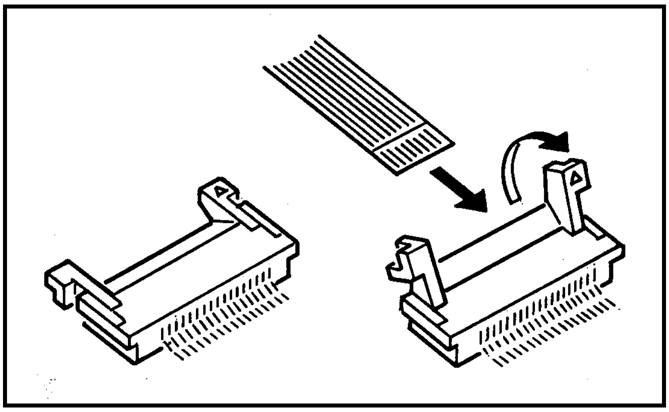


Fig. 6-1-2

3. Disconnect the connector P33 on Mech I/F P.C.Board at bottom of VTR. Then remove 3 screws (with spring) from the Cylinder unit, and remove the Cylinder unit without touching any mechanical part.

Note: Do not touch the cylinder surface by finger directly.

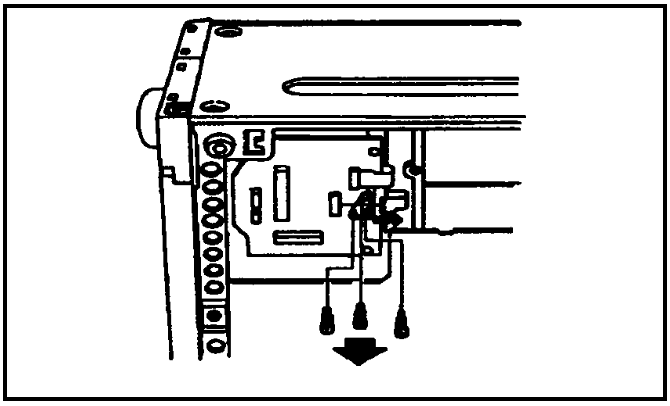


Fig. 6-1-3

(Installation)

1. Install a Cylinder unit as reverse order of its removal.

Note: Set the Mechanical Chassis pins are matched with the specified cylinder holes on the bottom of the cylinder.

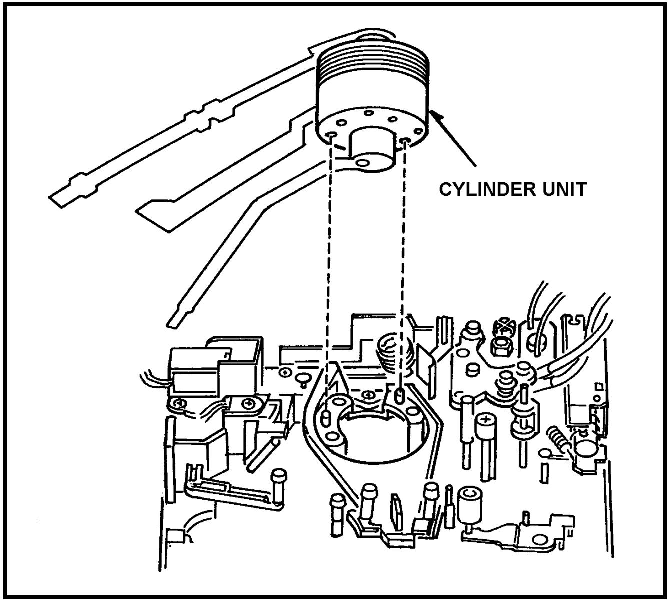


Fig. 6-1-4

2. After installing T1 Guide, T1 Guide position adjustment is necessary (Refer to adjustment procedure of item 6-1-3).

6-1-2. Cleaning Arm Unit Replacement

(Removal)

1. Unscrew the **2 screws (A)** to remove the T1 Guide as shown in Figure 6-1-5.
2. Pick up **the tip portion (B)** of Cleaning Arm Unit and remove the spring from Cleaner Arm Unit. Then remove the Cleaning Arm Unit as shown in Figure 6-1-5.

(Installation)

1. Install the cleaning Arm Unit, then hang the spring on Cleaning Arm Unit.
2. Install the T1 Guide and tighten **2 screws (A)**.
3. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated when the cylinder is rotated.
4. T1 Guide position adjustment should be performed.

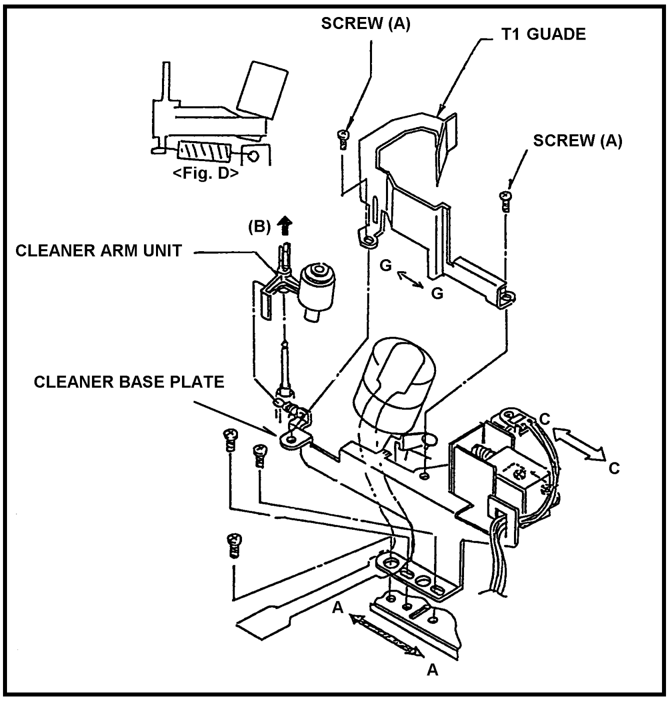


Fig. 6-1-5

6-1-3. T1 Guide Position Adjustment

Place the unit in Loading completion mode without tape.

< How to Make the No Tape Loading >

- Open the “SERVO ADJUST” menu in the Service menu.
- Select the item “T TORQUE” and press the Search button for making the loading condition. And turn power to off.

1. Observe the **clearance (B)** between T1 Guide and T1 post as shown in Figure 6-1-6. And make sure that it is within **0.2 to 0.5 mm**.
2. If not, loosen the **2 screws (A)** and adjust the position of T1 Guide by moving to arrow direction (G ⇔ G) so that the **clearance (B)** is within specification. And tighten the **2 screws (A)**.

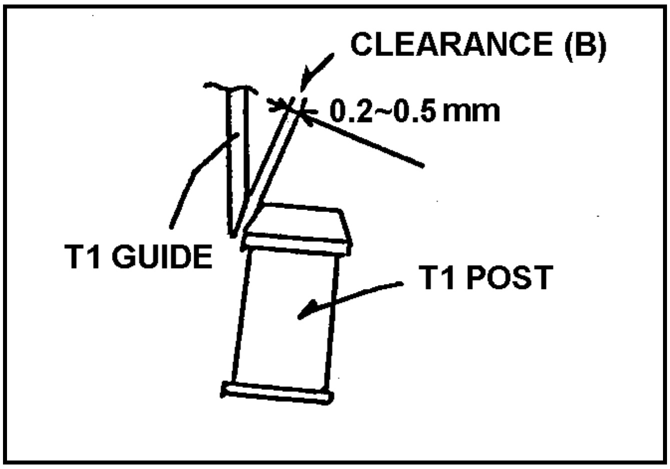
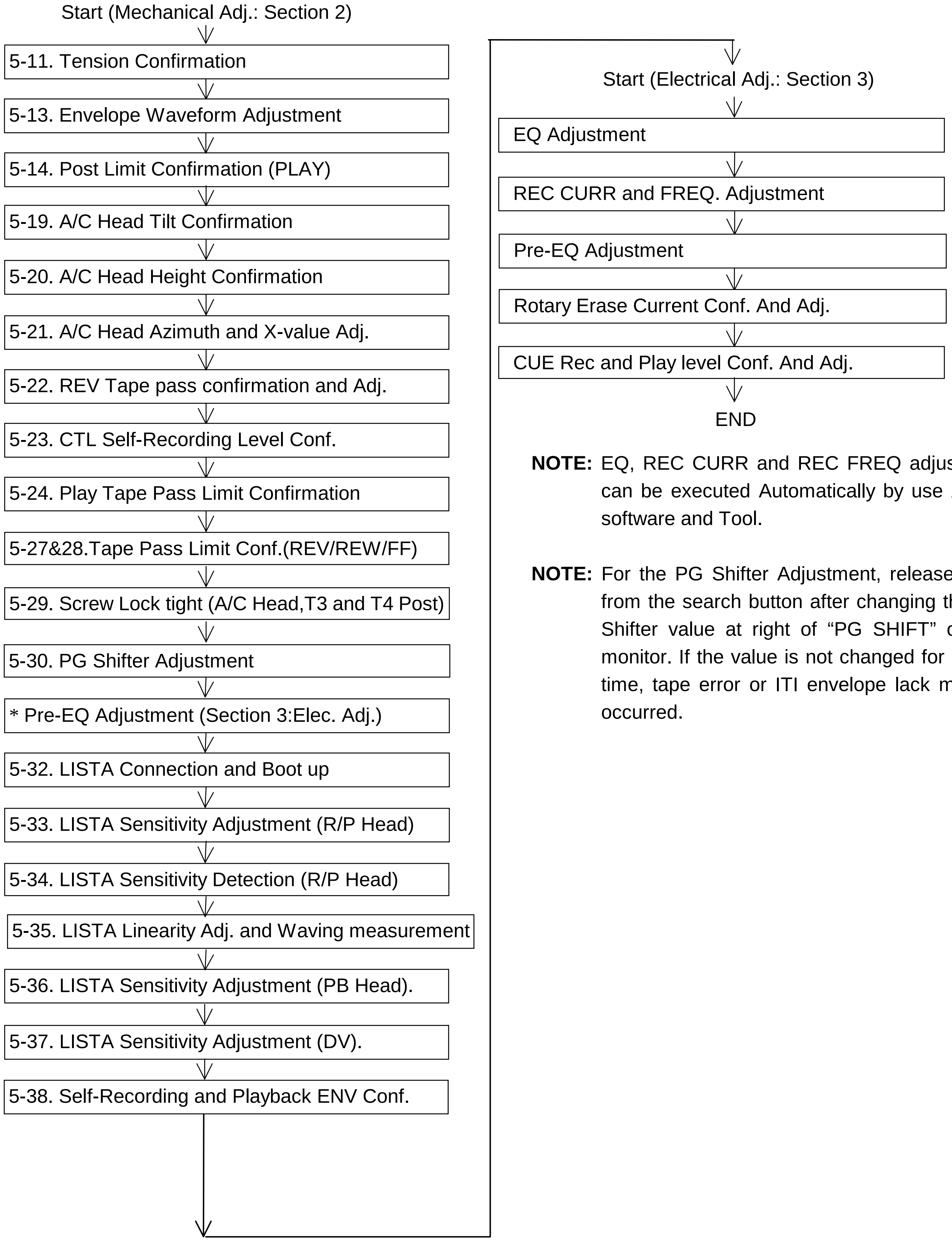


Fig. 6-1-6

6-1-4. Adjustment Flow Chart after Cylinder Unit Replacement

1. Adjust following items after Cylinder Unit replacement.


Start (Mechanical Adj.: Section 2)
5-11. Tension Confirmation
5-13. Envelope Waveform Adjustment
5-14. Post Limit Confirmation (PLAY)
5-19. A/C Head Tilt Confirmation
5-20. A/C Head Height Confirmation
5-21. A/C Head Azimuth and X-value Adj.
5-22. REV Tape pass confirmation and Adj.
5-23. CTL Self-Recording Level Conf.
5-24. Play Tape Pass Limit Confirmation
5-27&28.Tape Pass Limit Conf.(REV/REW/FF)
5-29. Screw Lock tight (A/C Head,T3 and T4 Post)
5-30. PG Shifter Adjustment
* Pre-EQ Adjustment (Section 3:Elec. Adj.)
5-32. LISTA Connection and Boot up
5-33. LISTA Sensitivity Adjustment (R/P Head)
5-34. LISTA Sensitivity Detection (R/P Head)
5-35. LISTA Linearity Adj. and Waving measurement
5-36. LISTA Sensitivity Adjustment (PB Head).
5-37. LISTA Sensitivity Adjustment (DV).
5-38. Self-Recording and Playback ENV Conf.
Start (Electrical Adj.: Section 3)
EQ Adjustment
REC CURR and FREQ. Adjustment
Pre-EQ Adjustment
Rotary Erase Current Conf. And Adj.
CUE Rec and Play level Conf. And Adj.
END

NOTE: EQ, REC CURR and REC FREQ adjustment can be executed Automatically by use AUTO software and Tool.

NOTE: For the PG Shifter Adjustment, release hand from the search button after changing the PG Shifter value at right of “PG SHIFT” on the monitor. If the value is not changed for a long time, tape error or ITI envelope lack may be occurred.

6-2. A/C Head Replacement

6-2-1. Replacement

✶ Required tools:
Nut Driver (5.5m/m)(VFK1150)
Hex Driver (VFK1148)
Hex Wrench (VFK1190)

(Removal)

1. Remove the Top Plate.
2. Loosen the **hex. screw (B)** and remove the **Nut (C)**. Pick up the Head Height Adjustment Spring and then remove the A/C Head Unit as shown in Figure
   Point: Memorize the height of Nut (C) before removing the **Nut (C)**,

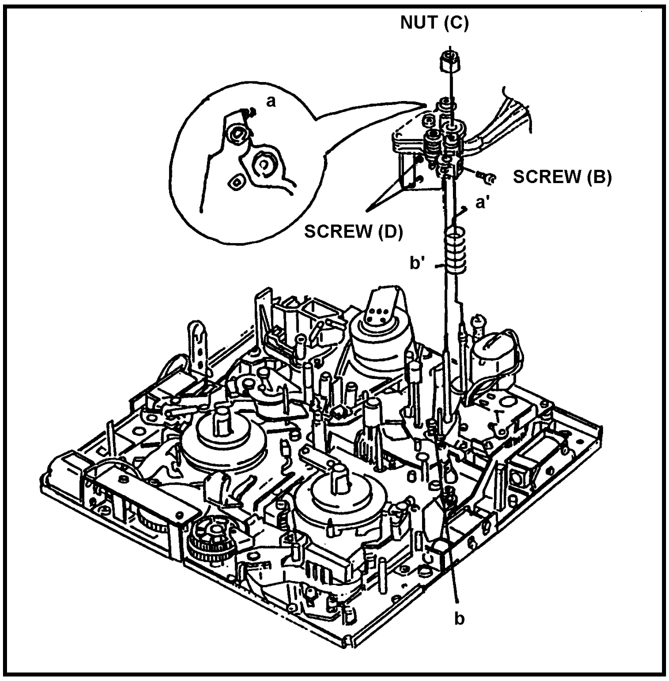


Fig. 6-2-1

3. Remove the **2 screws (A).** and disconnect the 2 **connectors P1** on the A/C Head I/F P.C.Board and **P30** on the Mech I/F P.C.Board, and then remove the A/C Head from the A/C Head Plate.
4. Remove **2 screws (D)** to remove the Shield Cover as shown in Figure 6-2-1.
5. Unsolder the lead wires as shown in Figure 6-2-3.

Note: When unsolder the lead wires, do not unsolder all at the same time.)

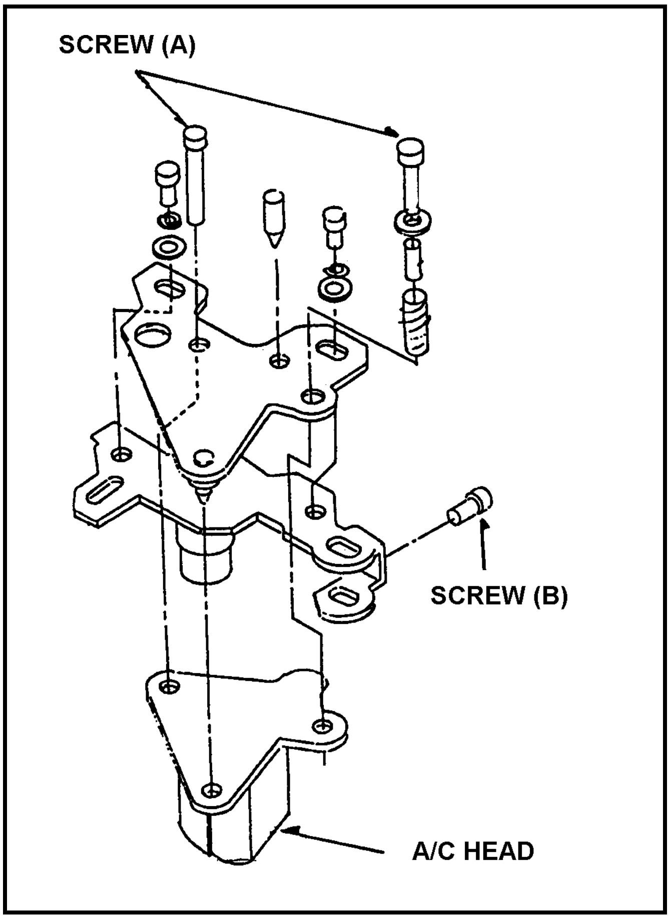


Fig. 6-2-2

(Installation)

1. Remove the Shield Case from the New A/C Head and solder the lead wires to New A/C Head (Refer to Figure 6-2-3).
2. Re-install the shield case to A/C Head.
3. Install the A/C Head to A/C Head Plate and tighten **2 screws (A)** so that A/C Head is parallel to A/C Head Plate.
4. Install the A/C Head Unit.
5. Put on the Head Height Adjustment Spring and tighten **the Nut (C)**.
6. Clean the surface of the A/C Head.
7. Perform the A/C Head adjustment.

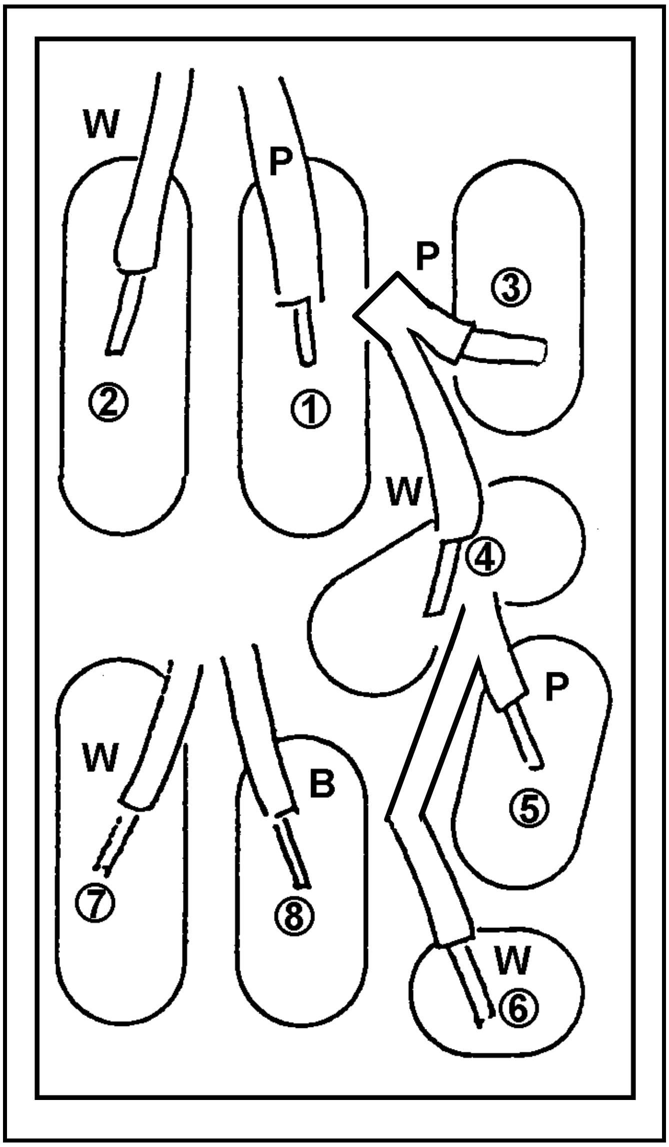
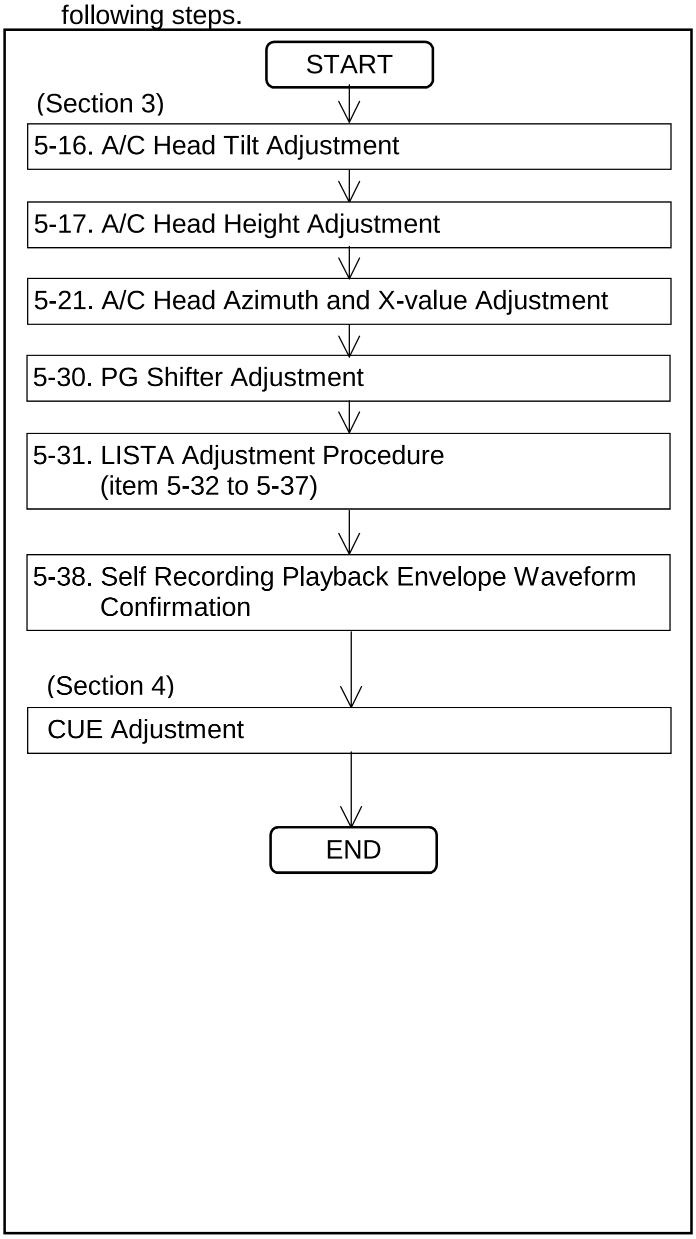

W
P
P
③
②
①
W
④
P
W
B
⑤
⑦
⑧
W
⑥

Fig. 6-2-3

A/C Head Side	Cable Color		Connector No.
1	PINK	YELLOW	P1
2	WHITE		
3	PINK	RED	
4	WHITE		
5	PINK	GREEN	
6	WHITE		
7	WHITE	YELLOW	P30
8	BLACK		

6-2-2. Adjustment Flowchart After A/C Head Replacement

1. After installing, Mechanical and Electrical Adjustments should be performed.
   NOTE: The **hex screw (B)** is kept loose until the A/C Head Height Adjustment is completed.
2. After replacing the A/C Head, perform the following steps.


START
(Section 3)
5-16. A/C Head Tilt Adjustment
5-17. A/C Head Height Adjustment
5-21. A/C Head Azimuth and X-value Adjustment
5-30. PG Shifter Adjustment
5-31. LISTA Adjustment Procedure (item 5-32 to 5-37)
5-38. Self Recording Playback Envelope Waveform Confirmation
(Section 4)
CUE Adjustment
END

6-3. Supply Reel Rotor Unit and Take Up Reel Rotor Unit Replacement

(Removal)

1. Remove the Top Panel (Refer to item [2-1. Removal of Top Panel]).
2. Remove the Front Loading Unit (Refer to item [2-5. Removal of Front Loading Unit]).
3. Remove the Bottom Panel (Refer to item [2-2. Removal of Bottom Panel]).
4. Disconnect the connector P34 and P35 on the Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Move the S1 post to loading direction by manual ejecting method until the screw (C) can removing position.
6. Confirm the supply and Take Up Brake are not release.
7. Press the iron core of M stopper solenoid to release the M stopper.
8. Remove the 4 screws (C), (D) and (E) as shown in Figure 6-3-2.
9. Remove the Supply and Take Up Reel Rotor Unit and Reel Outer Rail.

   Note: Memorized the groove position of Reel Base, which inserted the pin of Drive Arm Unit.

(Installation)

1. Through in the Reel Outer Rail to New Supply and Take Up Reel Rotor Unit.
2. Hang on the Reel Rotor Unit to Reel Inner Rail and Install the Reel Rotor Unit then the pin of Drive Arm Unit should be matched with groove position of Reel Base as shown in Figure 6-3-3.
3. Install the 4 screws (C), (D) and (E).
4. Confirm that the Reel Rotor Unit moving smoothly on the Rail by hard.
5. Move the Reel Rotor Unit to front side by hand and then pull up the iron core of M stopper solenoid for operating M stopper.
6. Set the unloading condition by turn the Emergency shaft counter-clockwise.
7. Connect the Flexible Cable to Connector P34 and P35 on the Mech I/F P.C.Board.
8. Adjust the Motor Torque Offset value (Refer to item 1-1 of section 3).
9. Confirm that the Tension value on playback mode (Refer to item 5-11).

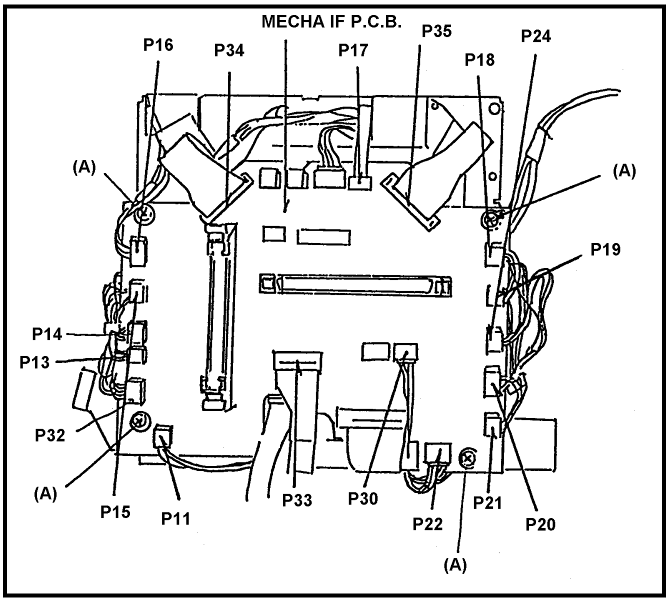

MECHA IF P.C.B.
P16
P34
P17
P35
P18
P24
(A)
(A)
P19
P14
P13
P32
(A)
P15
P11
P33
P30
P22
P21
P20
(A)

Fig. 6-3-1 Connection of S & T Reel Rotor Unit

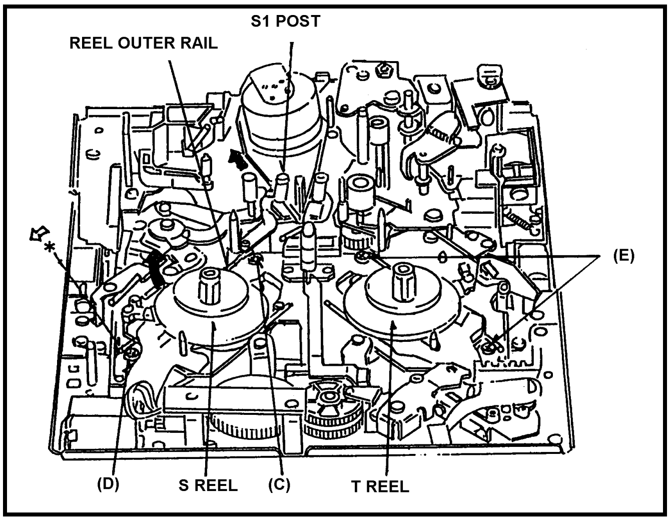

S1 POST
REEL OUTER RAIL
(E)
(D)
S REEL
(C)
T REEL

Fig.6-3-2 Removal of S & T Reel Rotor Unit

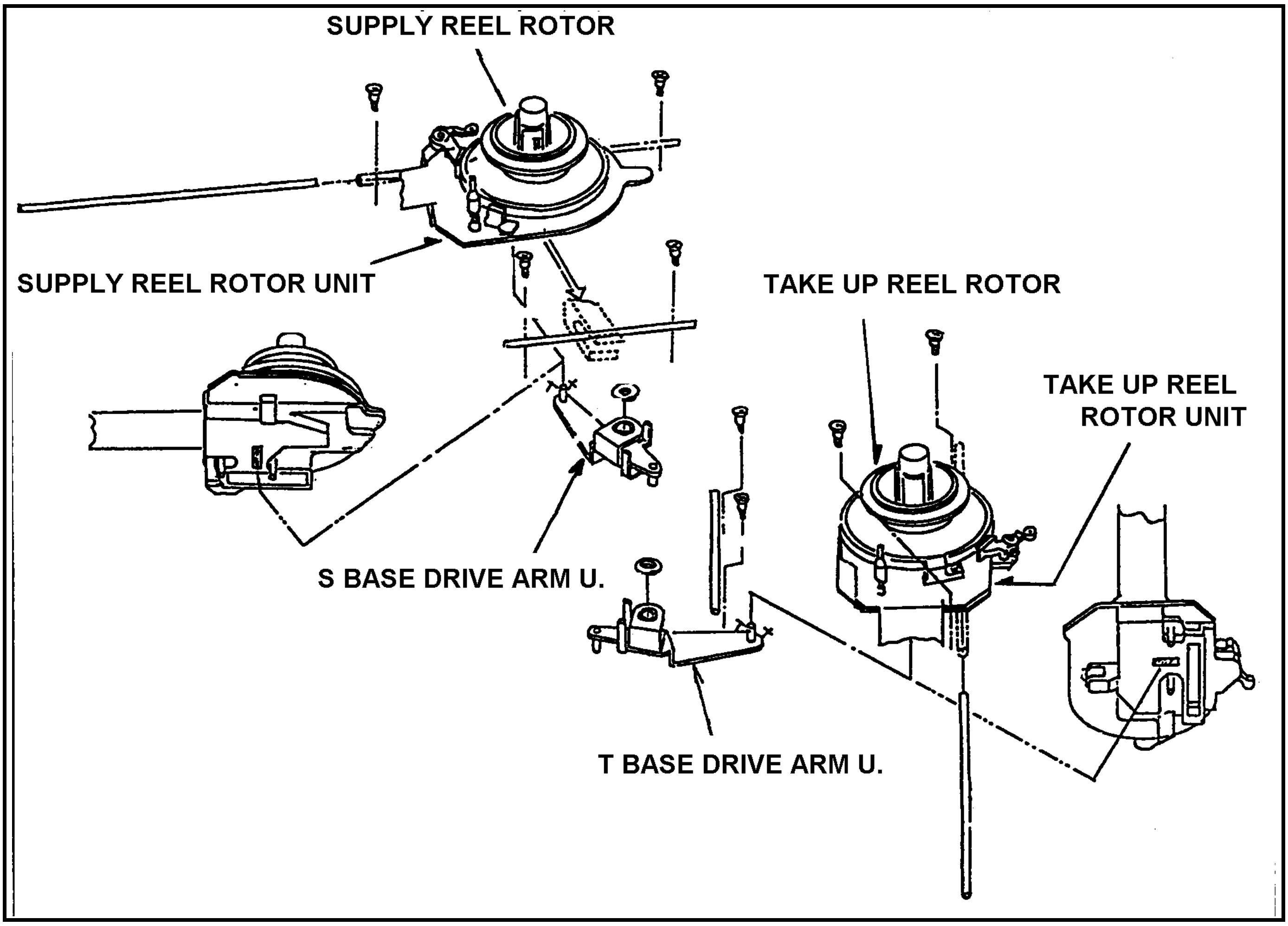

SUPPLY REEL ROTOR
SUPPLY REEL ROTOR UNIT
TAKE UP REEL ROTOR
TAKE UP REEL ROTOR UNIT
S BASE DRIVE ARM U.
T BASE DRIVE ARM U.

Fig.6-3-3 Installation of S & T Reel Rotor Unit

6-4. Supply and Take Up Brake Arm Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Press the iron core of Brake Solenoid for release the Brake.
4. Remove the cut washers (A) and remove the supply and Take Up Brake Arm Unit as shown in Figure 6-4-1.

(Installation)

1. When install the new Brake Arm Unit first, hang on the Brake Arm Spring as shown in Figure 6-4-1.
2. Follow the previous steps in reverse order.
3. Main Brake Torque confirmation is required (Refer to item 5-3).
4. Confirm that the Tension value on the Playback mode (Refer to item 5-11).

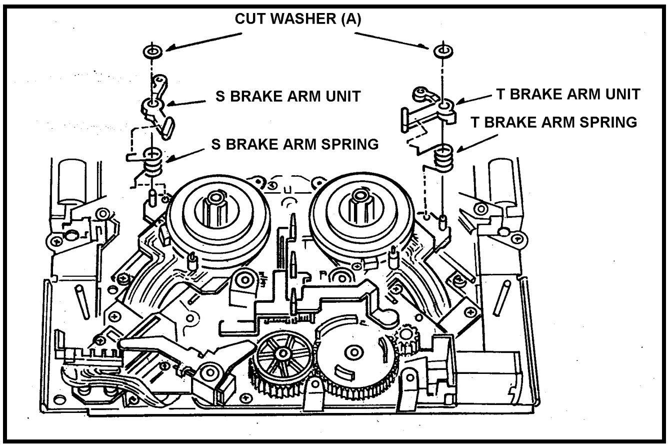

CUT WASHER (A)
S BRAKE ARM UNIT
T BRAKE ARM UNIT
T BRAKE ARM SPRING
S BRAKE ARM SPRING

Fig.6-4-1 Removal of S & T Break Arm Unit

6-5. Supply Brake Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P15 on the Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Unscrew the 2 screws (A) and remove the Supply Brake Solenoid Base Unit as shown in Figure 6-5-1.
6. Unscrew the 2 screws (B) and remove the supply Brake Solenoid from Supply Brake Solenoid Base Unit as shown in Figure 6-10-1.

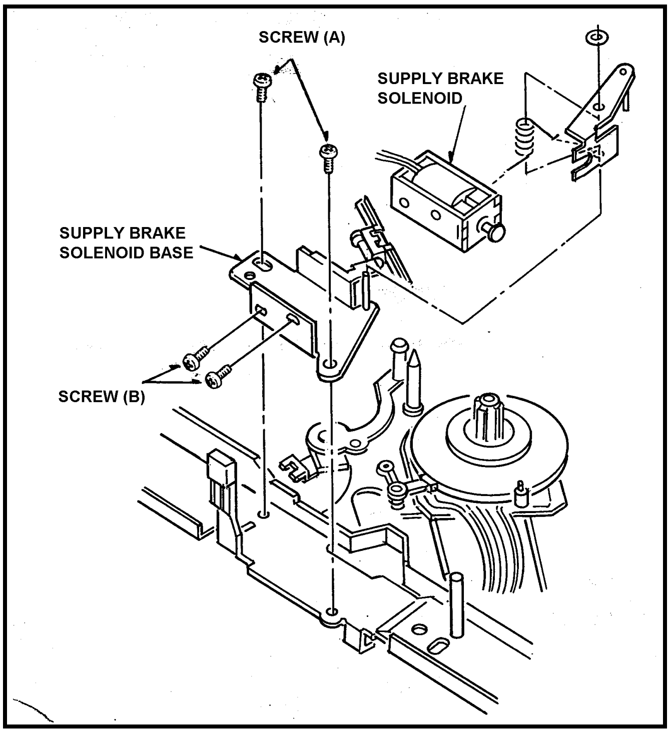

SCREW (A)
SUPPLY BRAKE SOLENOID
SUPPLY BRAKE SOLENOID BASE
SCREW (B)

Fig. 6-5-1 Removal of Supply Brake Solenoid

(Installation)

1. Install the new supply Brake Solenoid follow the removal steps in reverse order.

Note: Hang on the Supply Brake Spring as shown in Figure 6-6-1.

2. Adjustment is required after installation.

(Adjustment)

1. Place the reels in the M cassette size position.
2. Observe the clearance (A) between Brake pad and it's turntable as shown in Figure 6-5-2. And make sure that it is within 0.2 to 0.5mm.
3. If not, loosen the 2 screws (A), which fixed supply and Take Up Brake Solenoid Unit. And adjust the position of Brake Solenoid Unit by moving arrow direction so that the clearance (A) is within specification. And tighten the 2 screws (A).
4. After adjustment, change the reel position to S and L cassette size, and confirm that the clearance (A) is within specification.

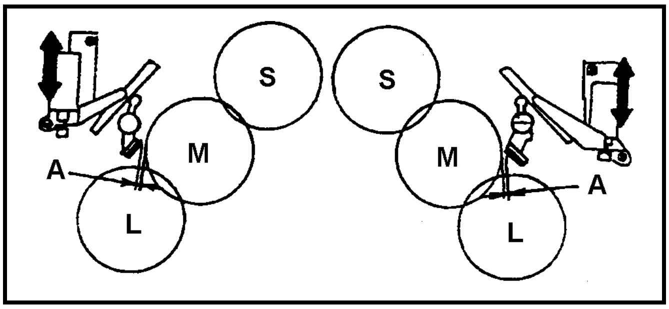


Fig.6-5-2 Brake Solenoid Adjustment

6-6. Take Up Brake Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P18 on the Mech I/F P.C.Board. as shown in Figure 6-3-1.
5. Unscrew the 2 screws (A) and remove the Take Up Brake Solenoid Base Unit as shown in Figure 6-6-1.
6. Unscrew the 2 screws (B) and remove the Take Up Brake Solenoid from Take Up Brake Solenoid Base Unit as shown in Figure 6-6-1.

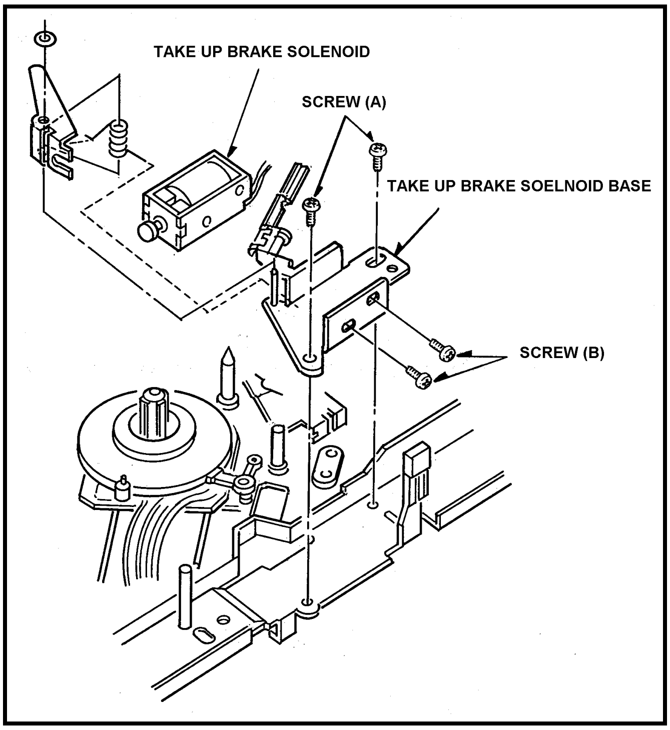


Fig.6-6-1 Removal of Take Up Brake Solrnoid

(Installation)

1. Install the new Take up Brake Solenoid follow the removal steps in reverse order.

Note: Hang on the Take up Brake Spring as shown in Figure 6-6-1.

2. After installation, position adjustment should be performed as follows.

(Adjustment)

Please adjust the position of Take up Brake Solenoid Unit follow the adjustment procedure, which is described item 6-5.

6-7. Pinch Solenoid Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P20 on the Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Unscrew the 2 screws (A) and remove the Pinch Solenoid Unit as shown in Figure 6-7-1.
6. Unscrew the 2 screws (B) and remove the Pinch Solenoid Angle as shown in Figure 6-7-1.
7. Unscrew the 2 screw s (C) and remove the Pinch Solenoid from the Pinch Solenoid Base.

(Installation)

1. Install the new Pinch Solenoid follow the removal steps in reverse order.
2. After installation, Pinch Solenoid Position Adjustment is required (Refer to item 5-2).

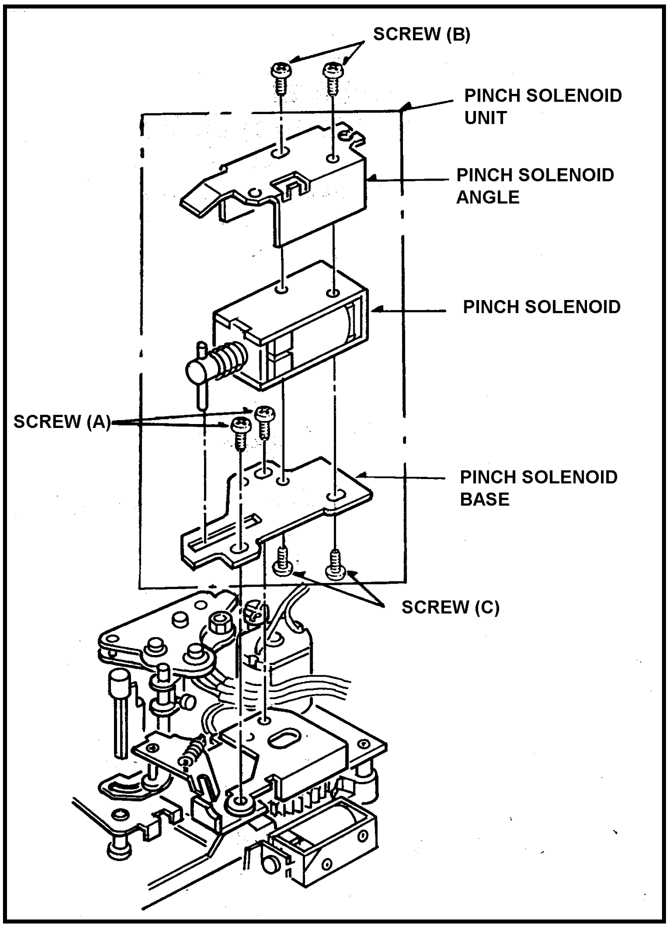

SCREW (B)
PINCH SOLENOID UNIT
PINCH SOLENOID ANGLE
PINCH SOLENOID
SCREW (A)
PINCH SOLENOID BASE
SCREW (C)

Fig.6-7-1 Removal Pinch Solenoid

6-8. Pinch Arm Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P20 on the Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Remove the Pinch Solenoid Unit (Refer to item 6-9, then hang off the Pinch Solenoid Lever as shown in Figure 6-8-1.
6. Remove the cut washer (A) and remove the Pinch Solenoid Lever as shown in Figure 6-8-1.
7. Remove the cut washer (B) and remove the Pinch Arm Unit as shown in Figure 6-8-1.

(Installation)

Install the new Pinch Arm Unit follow the removal steps in reverse order then Pinch Solenoid Position Adjustment is necessary (Refer to item 5-2).

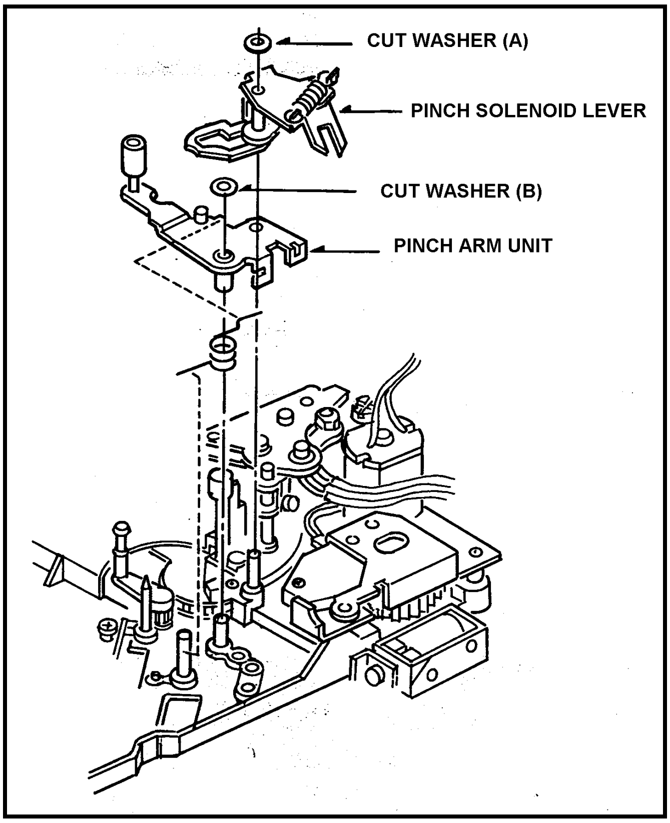

CUT WASHER (A)
PINCH SOLENOID LEVER
CUT WASHER (B)
PINCH ARM UNIT

Fig.6-8-1 Removal of Pinch Arm Unit

6-9. Loading Motor Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P21 on Mech I/F P.C.Board as shown in Figure 6-3-1.
5. Remove the Pinch Solenoid Unit (Refer to item 6-7).
6. Remove the Pinch Solenoid Lever. (Refer to item 6-8).
7. Unscrew the screw (B), and remove the Emergency Shaft as shown in Figure 6-9-1.
8. Unscrew the 2 screws (C) and remove the Loading Motor Neutral Unit as shown in Figure 6-9-1.
9. Unscrew the 2 screws (D) and remove the Loading Motor Unit as shown in Figure 6-9-1.

(Installation)

1. Install the new Loading Motor Unit to Loading Motor Neutral Unit by tightening 2 screws (D).
2. Install the Loading Motor Neutral Unit by tightening the 2 screws (C), then be careful that the pin of Mode SW Unit should be matched to groove position of main Cam Gear.
3. Install the Emergency Shaft by tightening the screw (B).
4. Install the Pinch Solenoid Unit and after installation it, Pinch Solenoid Position adjustment is required. (Refer to item 5-2).
5. Connect the connector P21 on the Mech I/F P.C.Board. as shown in Figure 6-3-1.

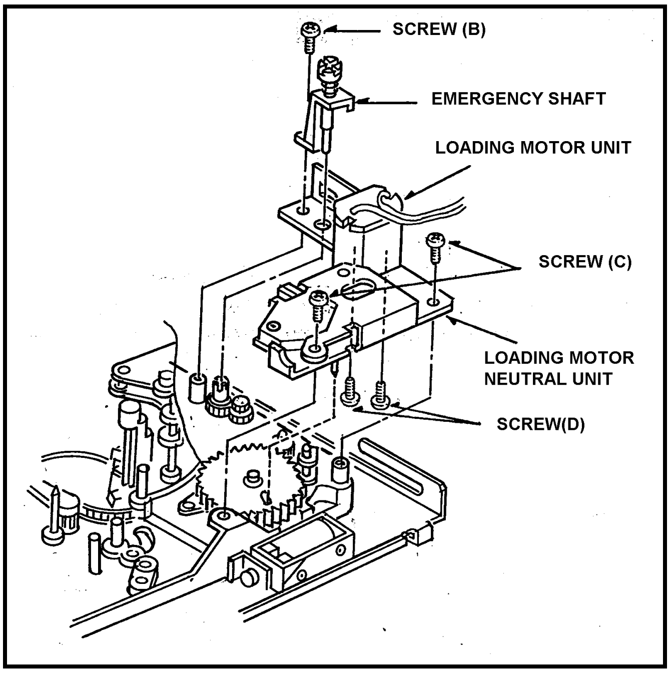


Fig. 6-9-1 Removal of Loading Motor

6-10. Mode Select Switch Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Bottom Panel.
4. Disconnect the connector P22 on the Mech I/F P.C.Board as shown as Figure 6-3-1.
5. Remove the Pinch Solenoid Unit and Loading Motor Neutral Unit (Refer to item 6-9).
6. Remove the screw (D) and remove the Mode Select Switch Unit from Loading Motor Neutral Unit as shown in Figure 6-10-1.

(Installation)

1. Install the New Mode Select Switch Unit follow the removal steps in reverse order (Please refer to item [6-9. Loading Motor Unit Replacement]).

Note: Be careful the pin of Mode Switch Unit should be matched to groove of Main Cam Gear.

2. After install the Pinch Solenoid Unit, Pinch Solenoid Position adjustment is required (Refer to item 5-2).

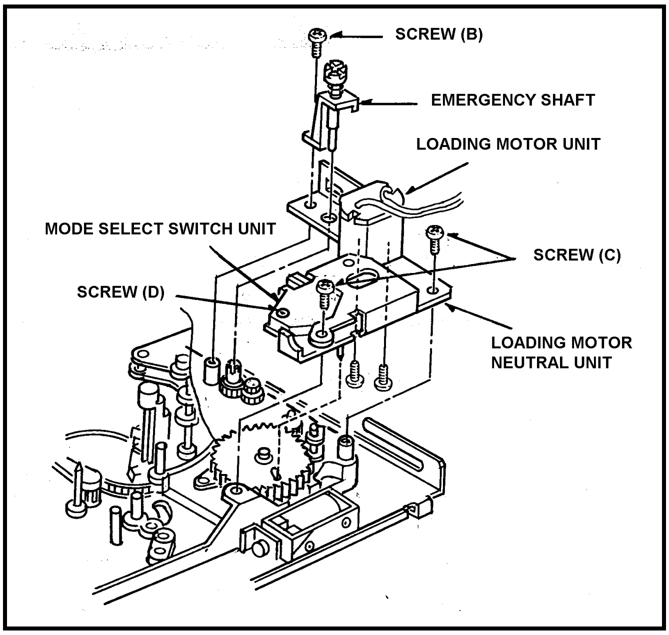

SCREW (B)
EMERGENCY SHAFT
LOADING MOTOR UNIT
MODE SELECT SWITCH UNIT
SCREW (C)
SCREW (D)
LOADING MOTOR
NEUTRAL UNIT

Fig.6-10-1 Removal of mode Select Switch Unit

6-11. Main Cam Gear Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Pinch Solenoid Unit (Refr to item 6-7) and Loading Motor Neutral Unit (Refer to item 6-9).
4. Remove the Main Cam Gear as shown in Figure 6-11-1.

(Installation)

1. Install the Main Cam Gear, then the pin of Main Cam Arm Unit (*) should be matched with the groove position of Main Cam Gear as shown in Figure 6-11-1.
2. Follow the removal steps in reverse order.
3. After installation, Pinch Solenoid Position Adjustment is required (Refer to item 5-2).

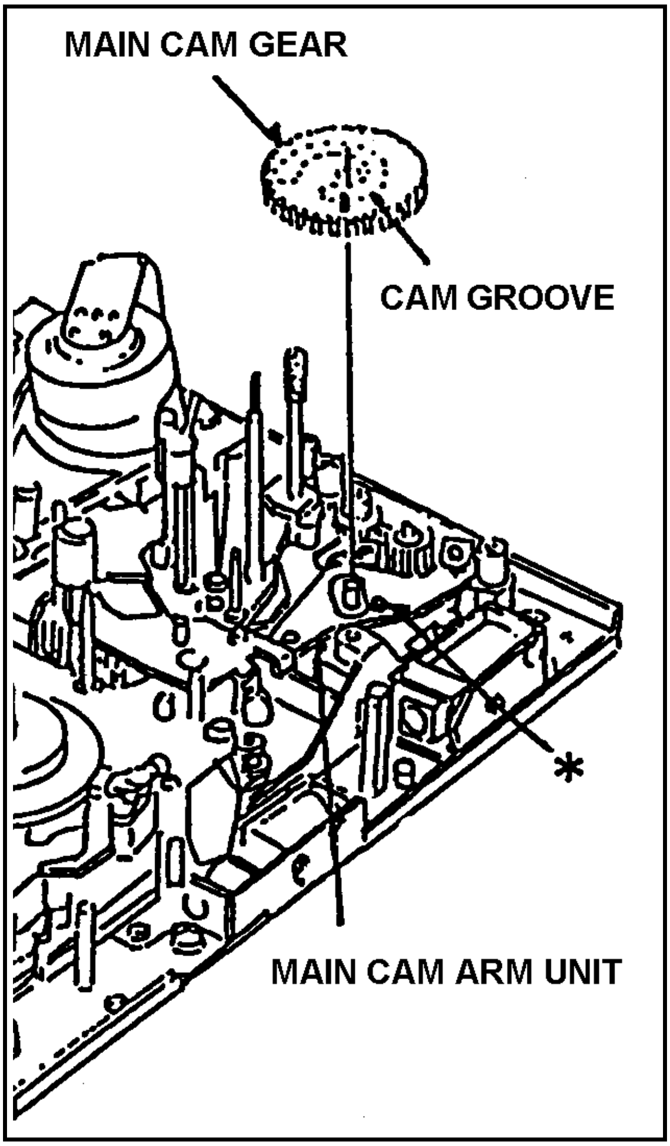

MAIN CAM GEAR
CAM GROOVE
*
MAIN CAM ARM UNIT

Fig.6-11-1 Removal of Main Cam Gear

6-12. S5 Post Base Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Unscrew the screw (A) and remove the S5 Post Base Unit as shown in Figure 6-12-1.

(Installation)

1. Install theS5 post Base Unit follow the removal steps in reverse order, then be careful the S5 Post Base Unit is install to mech chassis as shown in Figure 6-12-1.
2. After installation, Post Height pre-adjustment (Refer to item 5-4) and Linearity adjustment (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.

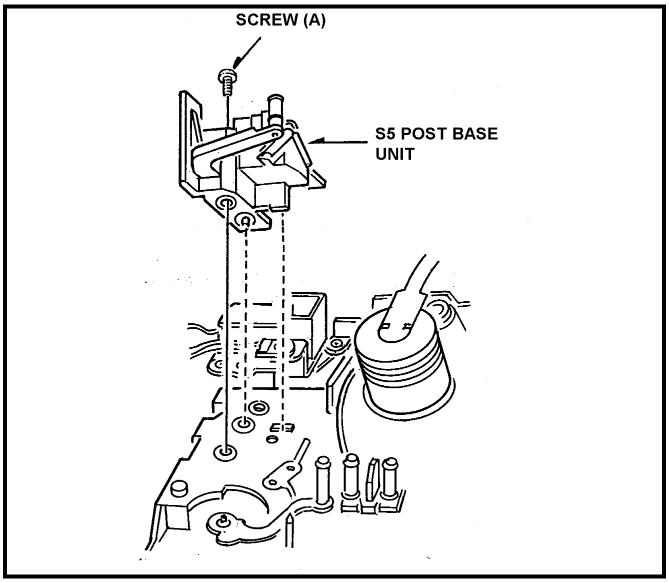

SCREW (A)
S5 POST BASE UNIT

Fig.6-12-1 Removal of S5 Post Base Unit

6-13. Tension Arm Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the Cut Washer (A) and hang off the Tension Regi Spring, then remove the Tension Arm Unit as shown in Figure 6-13-1.

(Installation)

1. Install the new Tension Arm Unit follow the removal steps in reveres order.
2. After installation, Tension Arm Adjustment should be performed the following steps.

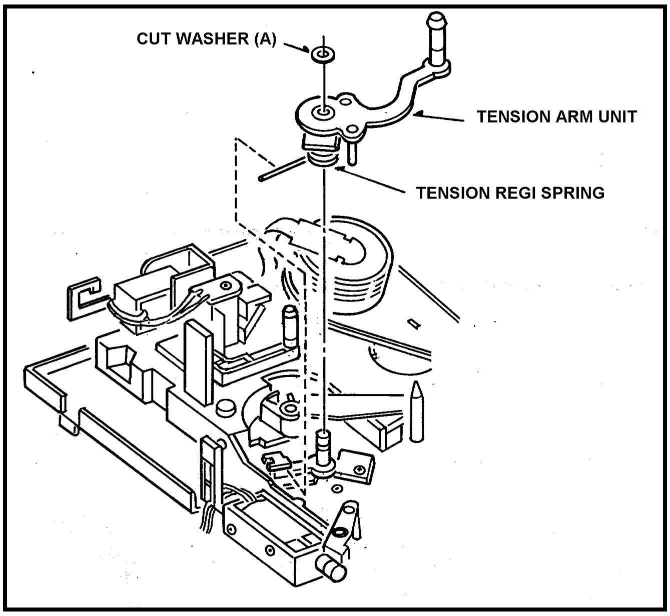
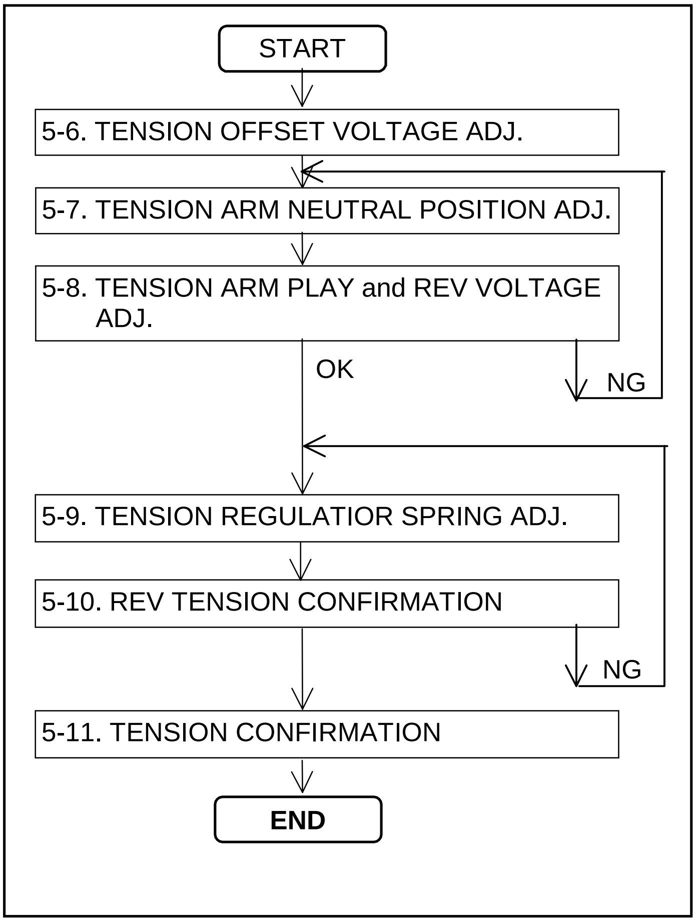

CUT WASHER (A)
TENSION ARM UNIT
TENSION REGI SPRING

Fig.6-13-1 Removal of Tension Arm Unit

Tension Arm Adjustment Flowchart


START
5-6. TENSION OFFSET VOLTAGE ADJ.
5-7. TENSION ARM NEUTRAL POSITION ADJ.
5-8. TENSION ARM PLAY and REV VOLTAGE ADJ.
OK
NG
5-9. TENSION REGULATIOR SPRING ADJ.
5-10. REV TENSION CONFIRMATION
NG
5-11. TENSION CONFIRMATION
END

6-14. S1 Post Loading Arm Unit Replacement and Adjustment

(Removal)

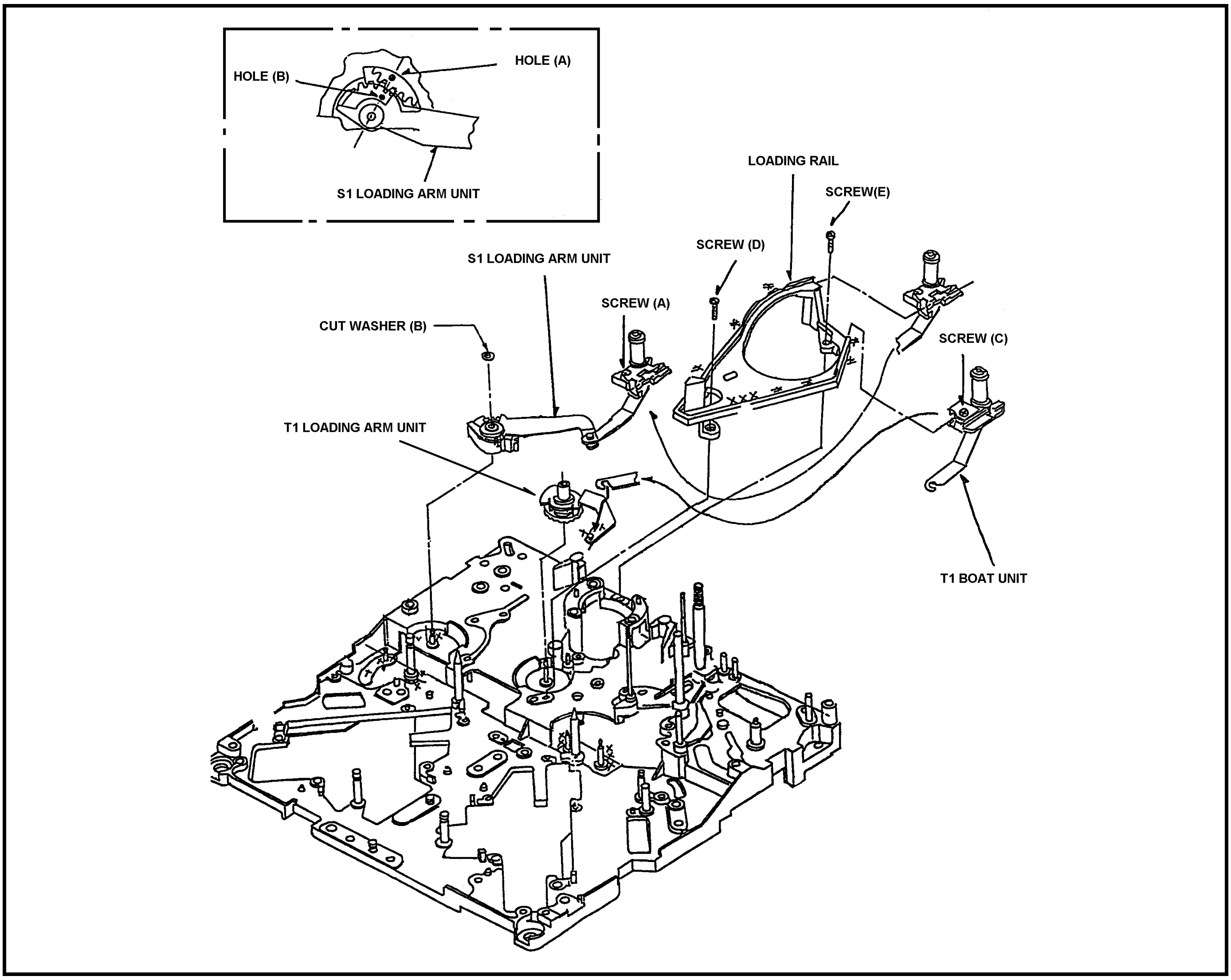
1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the S5 Post Base Unit (Refer to item 6-12).
4. Remove the Tension Arm Unit(Refer to item 6-13).
5. Unscrew the screw (A) and remove the S1 Post from Loading Rail as shown in Figure 6-14-1.
6. Remove the Cut Washer (B) and remove the S1 Loading Arm Unit as shown in Figure 6-14-1.

(Installation)

1. Install the new S1 Loading Arm Unit follow the removal steps in reverse order, then S1 Post Loading Arm Unit Phase Adjustment should be performed as follows.
2. After installation, confirm that the S1 Post moving smoothly on the Loading Rail.
3. Tension Arm (Refer to item 5-5), Post Height Pre-Adjustment (Refer to item 5-4) and Linearity Adjustment. (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.

(Adjustment)

1. When install the S1 Post Loading Arm Unit, then the hole (A) should be matched hole (B) as shown in Figure 6-14-1.



HOLE (A)
HOLE (B)
S1 LOADING ARM UNIT
LOADING RAIL
SCREW(E)
SCREW (D)
S1 LOADING ARM UNIT
SCREW (A)
CUT WASHER (B)
SCREW (C)
T1 LOADING ARM UNIT
T1 BOAT UNIT

Fig.6-14-1 Removal of S1 Post Loading Arm Unit

6-15. T1 Boat Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Unscrew the screw (C) and remove the T1 Post from Loading Rail as shown in Figure 6-14-1.
4. Hang off the T1 Boat Unit from T1 Loading Arm Unit as shown in Figure 6-14-1.

(Installation)

1. Install the new T1 Boat Unit follow the removal steps in reverse order.
2. After installation confirm that the T1 Post moving smoothly on the Loading Rail.

Linearity adjustment (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.

6-16. T1 Loading Arm Unit Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the cylinder Unit (Refer to item 6-1).
4. Move the T1 Post to loading direction by manual ejecting method until the screw (D) can be removal position as shown in Figure 6-14-1.
5. Unscrew the 2 screws (A) and (C), then remove the S1 and T1 Post from Loading Rail as shown in Figure 6-14-1.
6. Unscrew the 2 screws (D) and (E), then remove the Loading Rail as shown in Figure 6-14-1.
7. Remove the T1 Loading Arm Unit as shown in Figure 6-14-1.

(Installation)

1. Install the T1 Loading Arm Unit follow the removal steps in reverse order, then Phase Adjustment should be performed as follows.

Note: This replacement should be performed simultaneously, replacement of Cylinder Unit. It is convenience for Replacement of T1 Loading Arm Unit.

(Adjustment)

1. When install the T1 Loading Arm Unit, then the hole (A) should be matched hole (B) as shown in Figure 6-16-1.
2. After installation confirm that the S1 and T1 Post moving smoothly on the Loading Rail.
3. Post Height Pre-adjustment (Refer to item 5-3) and Linearity adjustment (Refer to item 5-12 [Tape Pass Adjustment Procedure]) should be performed.

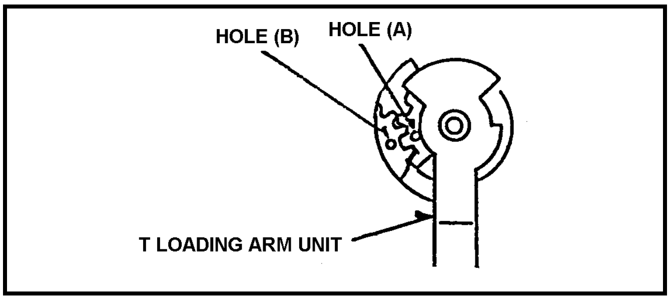


Fig.6-16-1 Phase Adjustment of T1 Lording Arm Unit

6-17. Cleaner Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Disconnect the connector P11 on the Mech I/F P.C.Board.
4. Unscrew the 2 screws (A) and remove the Cleaner Solenoid Unit as shown in Figure 6-17-1.
5. Unscrew the 2 screws (B) and remove the Cleaner Solenoid as shown in Figure 6-17-1.

(Installation)

1. Install the new Cleaner Solenoid follow the removal steps in reverse order.
2. After installation, Cleaner Solenoid Position adjustment should be performed as follows.

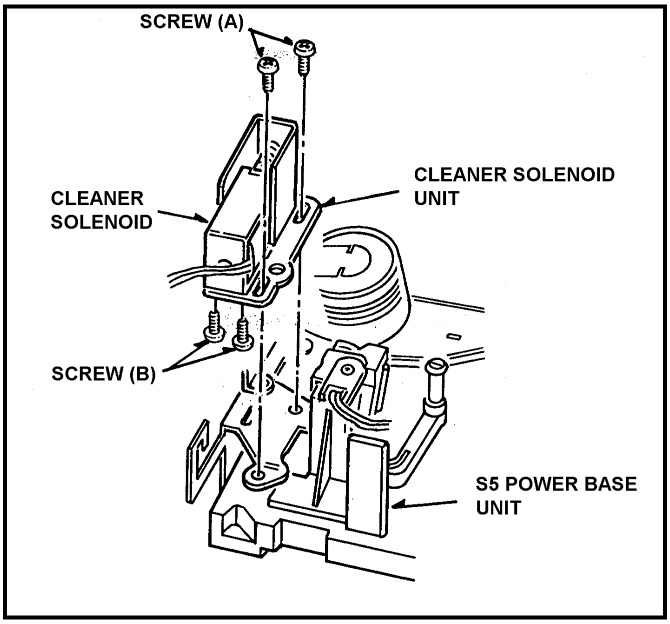

SCREW (A)
CLEANER SOLENOID UNIT
CLEANER SOLENOID
SCREW (B)
S5 POWER BASE UNIT

Fig.6-17-1 Removal of Cleaner Solenoid

6-17-1. Cleaner Solenoid Position Adjustment

✶ Tools Required : Eccentric Driver (VFK0357)

1. Press the iron core of Cleaner Solenoid.
2. Observe the clearance (D) between Cleaning Arm Unit and Cleaner Base Plate as shown in Figure 6-15-2. And make sure that it is within 0.5 to 0.7mm.
3. If not, loosen the 2 screws (A) and adjust the position of Cleaner Solenoid Unit by moving arrow direction (C⇔C) using the Eccentric drive so that the clearance (D) is within specification. And tighten the 2 screws.
4. After adjustment, confirm that as follow.
5. Press the iron core of Cleaner Solenoid and released it, then the Cleaning Roller is return to original position.
6. Press the iron core of the Cleaner Solenoid and confirm that the Cleaner Roller is rotated, when the Cylinder is rotated by hand.

Note: If remove the cleaner Base Plate, Cleaner roller Position adjustment should be performed.

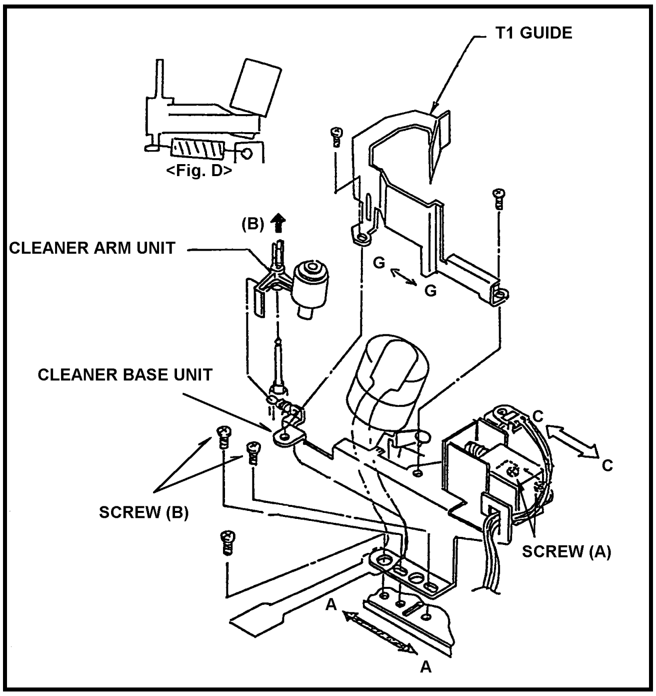

T1 GUIDE
<Fig. D>
(B)
CLEANER ARM UNIT
G
G
CLEANER BASE UNIT
C
C
SCREW (B)
SCREW (A)
A
A

Fig.6-17-2 Cleaner Solenoid Position Adjustment (1)

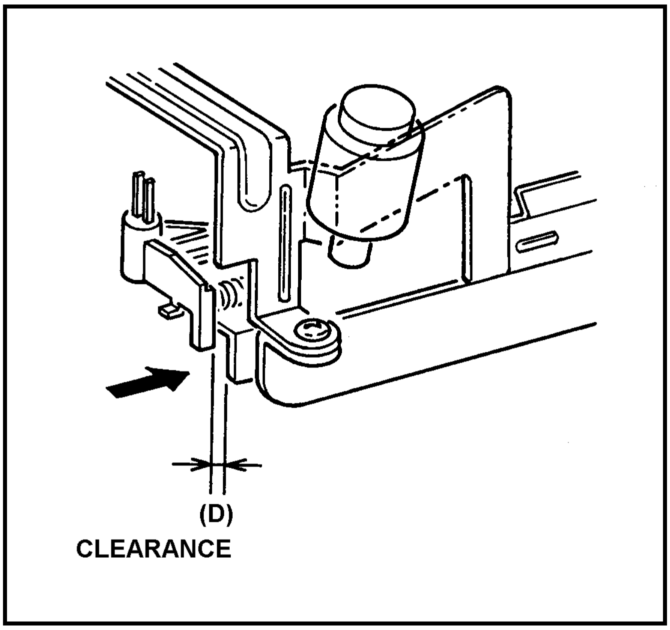

(D)
CLEARANCE

Fig.6-17-3 Cleaner Solenoid Position Adjustment (2)

6-17-2.Cleaner Roller Position Adjustment

✶ Tools Required : Eccentric Driver (VFK0357)

1. Observe the clearance (A) between Cleaner Roller and cylinder Unit as shown in Figure 6-15-3. And make sure that it is within 1.0 to 1.2mm.
2. If not, loosen the 2 screws (B) and adjust the position of Cleaner Base Plate by moving arrow direction (A ⇔ A) using the Eccentric driver so that the clearance (A) is within specification. And tighten the 2 screws (B).

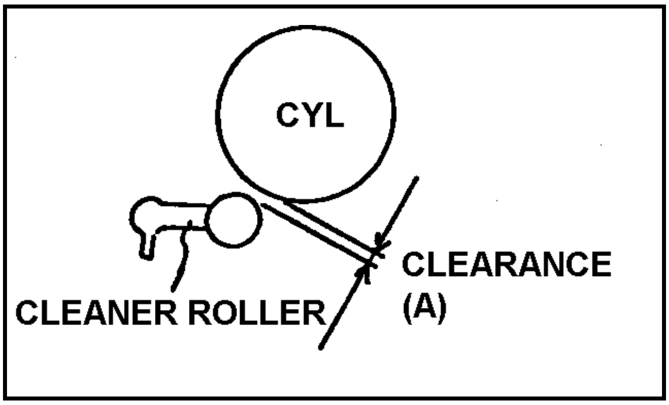


Fig.6-17-4 Cleaner Roller Position Adjustment

6-18. M-Stopper Solenoid Replacement and Adjustment

(Removal)

1. Remove the Top Cover.
2. Remove the Front Loading Unit.
3. Remove the connector P24 on the Mech I/F P.C.Board as shown in Figure 6-3-1..
4. Unscrew the 4 screws (A) and (B) and remove the M-Stopper Solenoid as shown in Figure 6-18-1.

(Installation)

1. Install the new M-Stopper Solenoid follow the removal steps in reverse order.
2. After installation, position adjustment should be performed as follows.

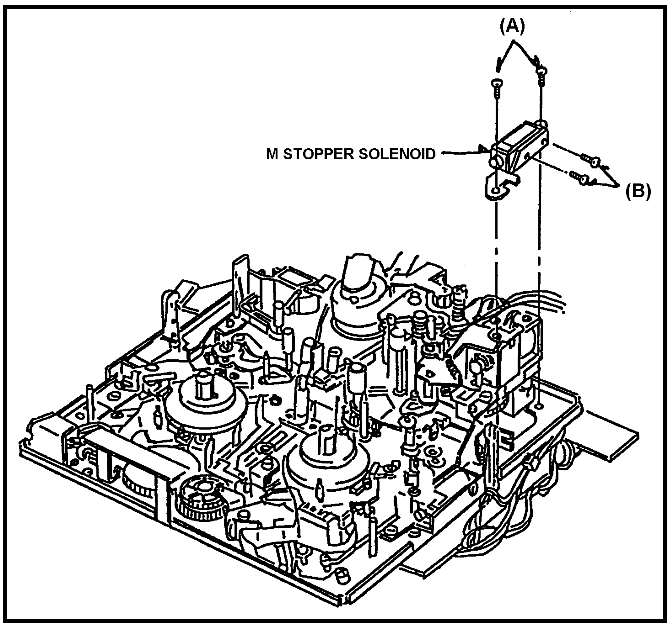


Fig.6-18-1 Removal of M-Stopper Solenoid

(Adjustment)

1. Place the reels in the L size position.
2. Push the iron core of M-Stopper Solenoid by hand.
3. Observe the clearance (A) between Mech Chassis and M-Stopper as shown in Figure 6-18-2. And make sure that it is within 1.1 to 1.3mm.
4. If not, loosen the 2 screws (A), which fixed M-Stopper Solenoid. And adjust the position of M-Stopper Solenoid so that the clearance (A) is within specification. And tighten the 2 screws (A).

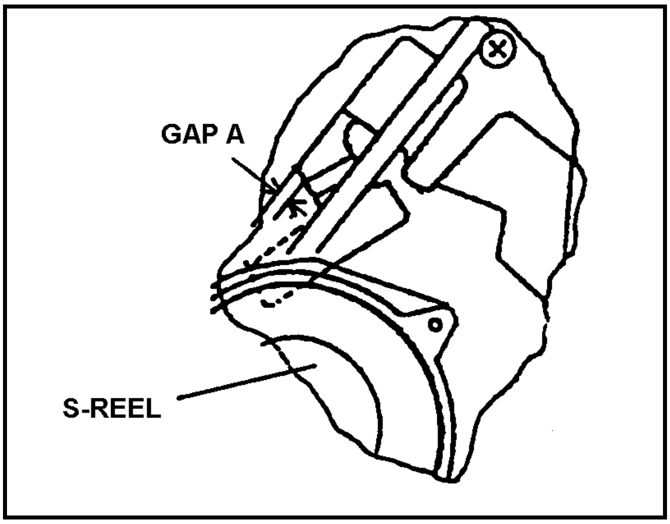


Fig.6-18-2 M-Stopper Solenoid Position Adjustment

6-19. Distinction SW Unit Replacement

(Removal)

1. Remove the Top Case Unit.
2. Remove the Front Loading Unit.
3. Remove the Bottom Case Unit.
4. Open the P.C.Board Unit and remove the Shield Plate.
5. Disconnect the connector P17 on Servo P.C.Board.
6. Unscrew the 3 screws (A) and remove the Distinction SW Unit as shown in Figure 6-19-1.

(Installation)

1. Install the new Distinction Switch Unit follow the removal steps in reverse order.
2. Confirm that the M and L cassettes touch to Distinction Switch Unit correctly.

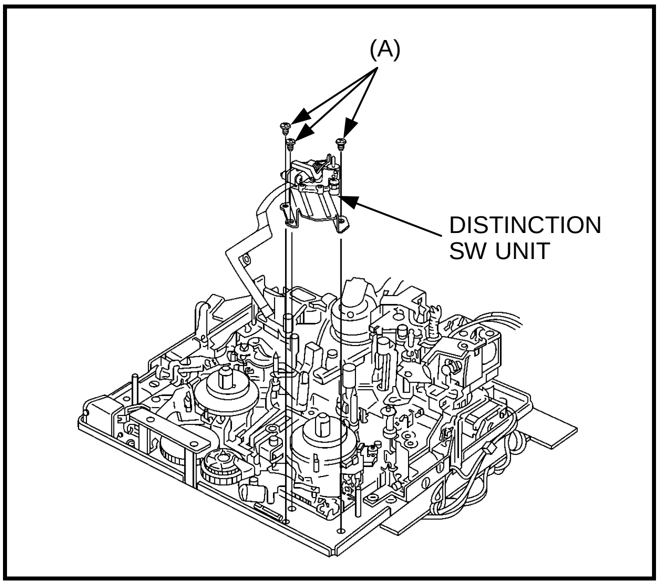


Fig. 6-19-1 Removal of Distinction Switch Uni

6-20. Reel Drive Motor Unit Replacement

(Removal)

1. Remove the Top Cover.
2. Remove the Front Loading Unit.
3. Disconnect the connector P16 on the Mech I/F P.C.Board. as shown in Figure 6-3-1.
4. Unscrew the 2 screws (A) and remove the Reel Drive Sensor P.C.Board as shown in Figure 6-19-1.
5. Unscrew the 2 screws (B) and remove the Reel Drive Motor Unit as shown in Figure 6-20-1.

(Installation)

Install the new Reel Drive Motor Unit follow the removal step in reverse order.

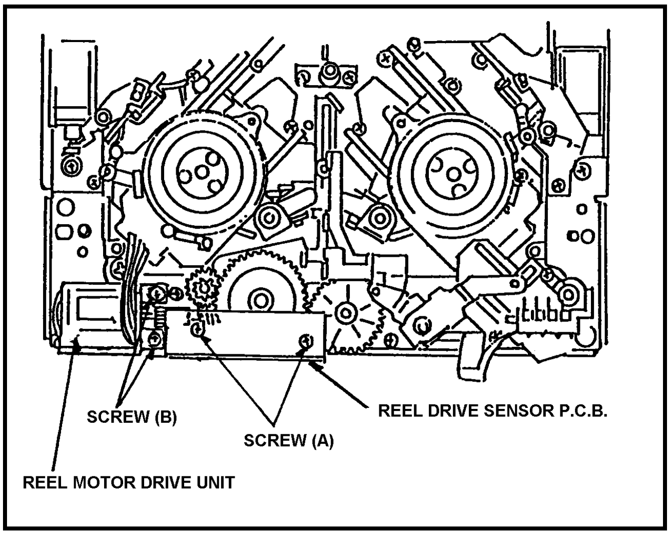


Fig.6-20-1 Removal of Reel Drive Motor Unit

6-21. L-M Release Angle Unit Replacement

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Unscrew the 2 screws (A) and remove the L-M Release Angle Unit as shown in Figure 6-21-1.

(Installation)

1. Install the new L-M Release Angle Unit follow the removal steps reverse order.

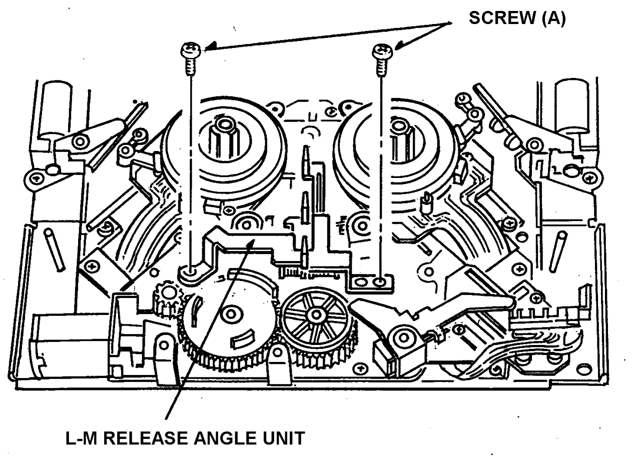

SCREW (A)
L-M RELEASE ANGLE UNIT

Fig.6-21-1 Removal of L-M Release Angle Unit

6-22.Slide Rod Unit Replacement and Adjustment

(Removal)

1. Remove the Top Panel.
2. Remove the Front Loading Unit.
3. Remove the L-M Release Angle Unit. (Refer to item 6-21).
4. Remove the Reel Drive Sensor P.C.Board (Refer to item 6-20).
5. Remove the Cut Washer (A) and remove the Reel Drive Cam Gear.
6. Remove the Cut Washer (B) and remove the MIC Drive Arm Unit.
7. Remove the Cut Washer (C) and remove the MIC Geneva Gear.
8. Remove the Cut Washer (D) and remove the Reel Drive Arm Unit as shown in Figure 6-22-2.
9. Remove the Supply and Take Up Reel Rotor Unit (Refer to item 6-3).
10. Remove the 2 Cut Washers (E) and remove the Supply and Take Up Base Drive Arm Unit.
11. Remove the 2 Cut Washers (F) and remove the Slide Rod Unit.

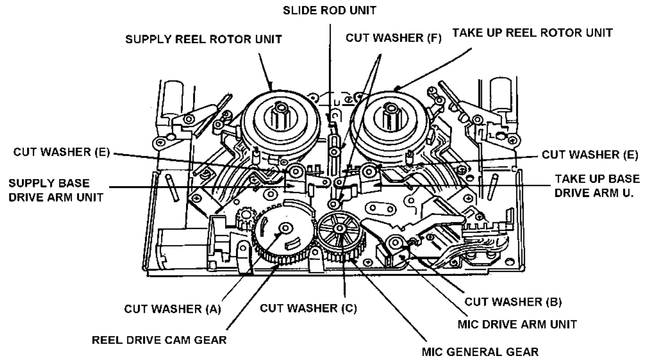

SLIDE ROD UNIT
SUPPLY REEL ROTOR UNIT
CUT WASHER (F)
TAKE UP REEL ROTOR UNIT
CUT WASHER (E)
SUPPLY BASE DRIVE ARM UNIT
CUT WASHER (E)
TAKE UP BASE DRIVE ARM U.
CUT WASHER (A)
CUT WASHER (C)
CUT WASHER (B)
MIC DRIVE ARM UNIT
REEL DRIVE CAM GEAR
MIC GENERAL GEAR

Fig.6-22-1 Removal of Slide Rod Unit

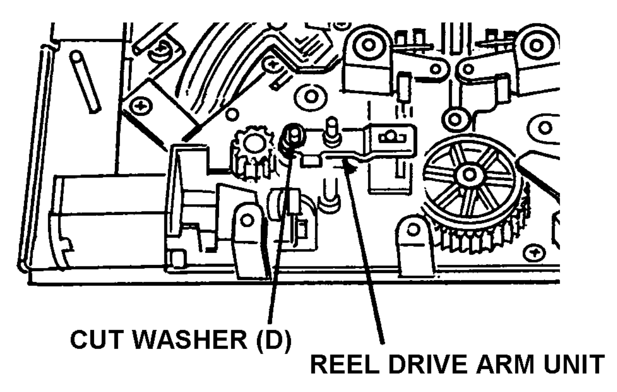

CUT WASHER (D)
REEL DRIVE ARM UNIT

Fig.6-22-2 Removal of Reel Drive Arm Unit

(Installation)

1. Install the new Slide Rod Unit follow the removal steps in reverse order.
2. When install the Reel Drive Cam Gear and MIC Geneva Gear, then phase adjustment should be performed as follows.

(Adjustment)

1. Install the MIC Geneva Gear to the Chassis.
2. Place the Reels in the M-Size position by hand.
3. Install the MIC Drive Arm Unit.
4. Place the REC Inhibit SW in front position on Distinction SW Unit by rotation of MIC Geneva Gear, and then MIC Geneva Gear should be positioned as shown in Figure 6-22-2.

Note: Protrusion of MIC DRIVE Arm Unit is positioned as shown in Figure 6-22-2.

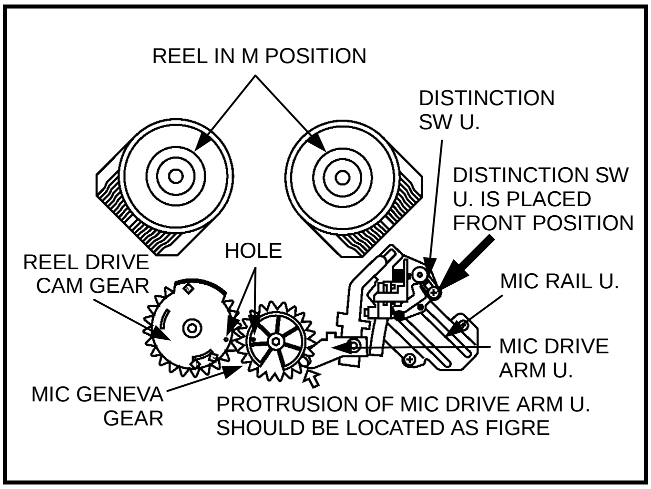

REEL IN M POSITION
DISTINCTION SW U.
DISTINCTION SW U. IS PLACED FRONT POSITION
REEL DRIVE CAM GEAR
HOLE
MIC RAIL U.
MIC DRIVE ARM U.
MIC GENEVA GEAR
PROTRUSION OF MIC DRIVE ARM U. SHOULD BE LOCATED AS FIGRE

Fig.6-22-3 Gear Phase Adjustment

5. Install the Reel Drive Cam Gear and hole of Reel Drive Cam Gear should be matched with the hole of MIC Geneva Gear as shown in Figure 6-22-3.
6. Install the Cut Washer (A), (B) and (C) as shown in Figure 6-22-1.

✶Point of Adjustment

1) Reel in M-Seze position.
2) Set the REC Inhibit SW in front position of Distinction SW Unit.
3) Portrusion of MIC Drive Arm Unit is positioned as shown in Figure 6-22-3.
4) Holes between Reel Drive Cam Gear and MIC Geneva Gear are matched.

6-23. T4 Post Phase Adjustment

1. Place unit into unloading condition.
2. Confirm that the hole (B) of T4 connection Gear was matched to hole of T4 post as shown in figure 6-23-1.
3. Confirm that the portion (C) of T4 connection Gear and hole (A), which are located as shown in figure 6-23-1.
4. If not, adjust the phase of T4 post follow the above procedure.

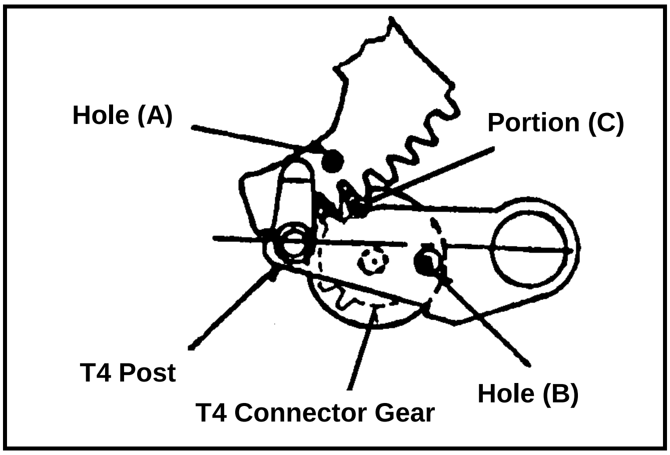

Hole (A)
Portion (C)
T4 Post
T4 Connector Gear
Hole (B)

Fig.6-23-1 Phase of T4 Post

6-24. Thrust Adjustment Screw Replacement and Adjustment

1. Remove the Thrust Adjustment Screw.
2. Enforce cleaning of point department of capstan shaft with an applicator.
3. Put the oil (VFK0906) on a new Thrust Adjustment Screw and install the upper end of the Capstan Housing.
4. Turn the Thrust Adjustment Screw slowly to counter-clockwise until the Capstan Rotor just starts turning (separate from the Capstan Rotor).
5. Turn the Trust Adjustment Screw an another angle of 270° from 180° (about 225°) clockwise as shown in Fig. 6-24-2.
6. Put the glue (Ex: Three Bond 1401B) on the Thrust Adjust Screw.
7. Confirm whether the Oil Seal does not come in contact with the Capstan Housing.

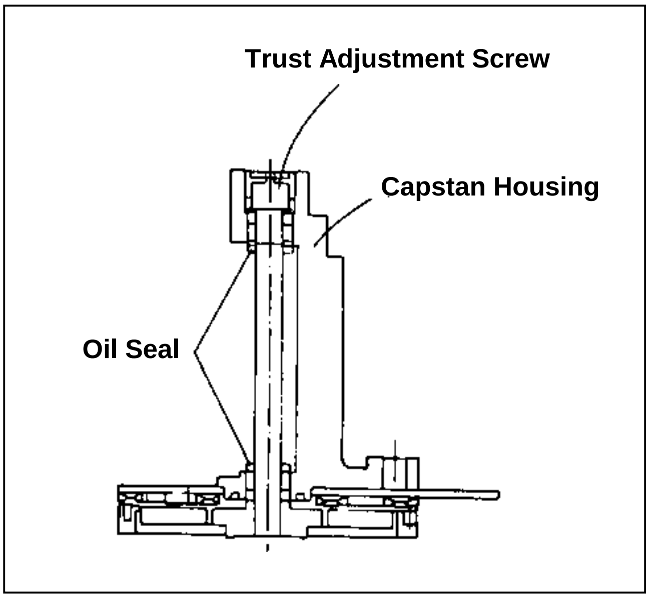

Trust Adjustment Screw
Capstan Housing
Oil Seal

Fig.6-24-1 Removal of Trust Adjustment Screw

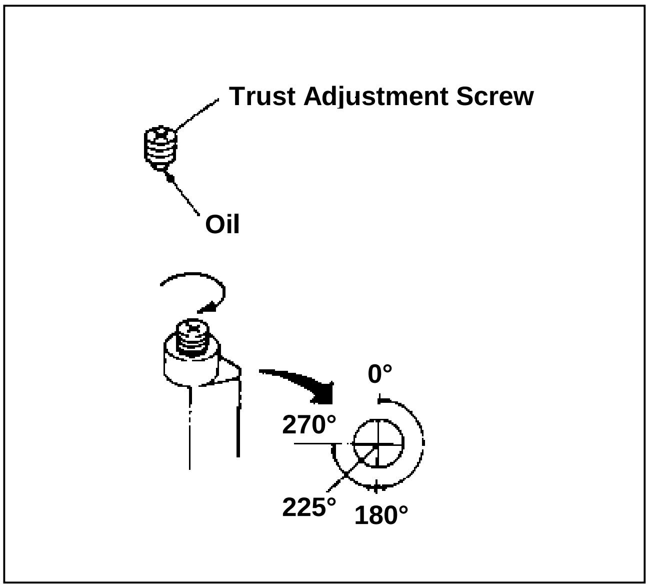

Trust Adjustment Screw
Oil
0°
270°
225°
180°

Fig.6-24-2 Adjustment of Thrust Adjustment Screw

SECTION 4

ELECTRICAL ADJUSTMENT

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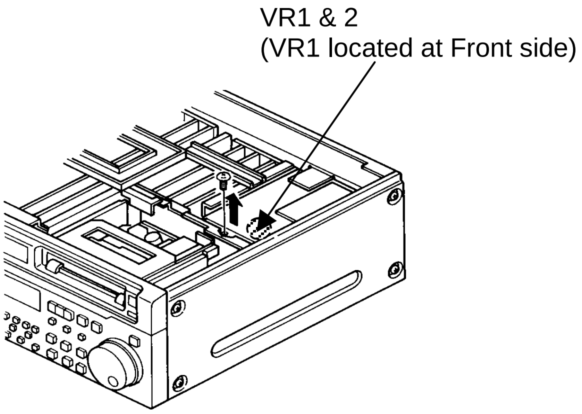
1. POWER

1-1. +5V and +12V Confirmation & Adjustment

BOARD	POWER 2
SPEC.	5V: 5.1V ± 0.1V 12V: 11.8V ± 0.6V
TEST	TP6 (+5V), TP12 (+12V) (SYSCON BOARD:F2)
ADJUST	VR1 (+5V), VR2 (+12V)
INPUT	--------------
MODE	EJECT
M.EQ	Digital Volt Meter

1. After connect the test point on SYSCON Board, turn the power ON.
2. Confirm that the voltage at TP6 and 12 in the specification.
3. If it is not, adjust VR1 and VR2 so that the voltage in the specification.



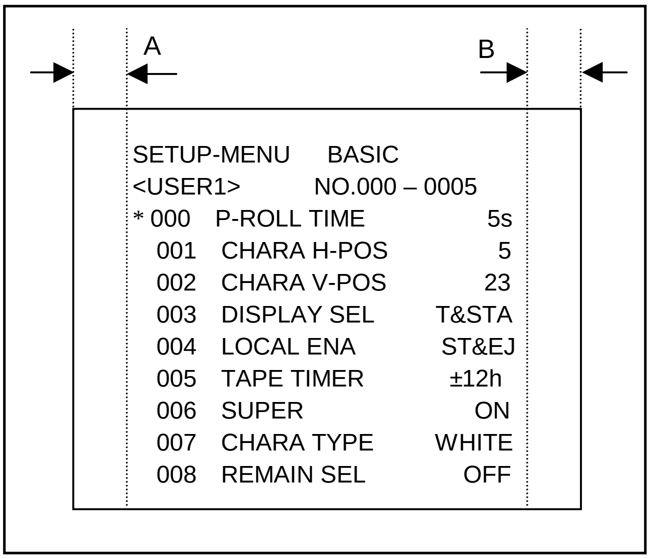
2. SYSTEM CONTROL

2-1. Super Impose Position Adjustment

BOARD	SYSCON (F2)
SPEC.	A = B
TEST	MONITOR
ADJUST	VC1
INPUT	--------------
MODE	EJECT
M.EQ	Monitor TV

1. Press the MENU , and displayed the SETUP-MENU.
2. Adjust VC1 so that the width A and B are equal.
3. Press the MENU button, and finished the SETUP-MENU.

NOTE: The display of menu may be different the above figure.



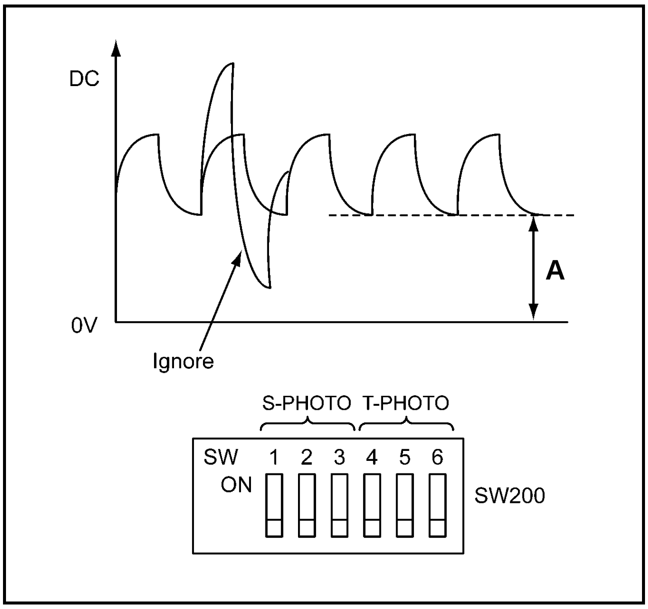
```
SETUP-MENU     BASIC
<USER1>          NO.000 – 0005
* 000   P-ROLL TIME              5s
   001   CHARA H-POS              5
   002   CHARA V-POS             23
   003   DISPLAY SEL          T&STA
   004   LOCAL ENA            ST&EJ
   005   TAPE TIMER            ±12h
   006   SUPER                   ON
   007   CHARA TYPE           WHITE
   008   REMAIN SEL             OFF
```

3. MECH INTERFACE

3-1. Photo Sensor Voltage Adjustment

BOARD	MECH INTERFACE
SPEC.	A = 3.0~4.3VDC
TEST	Foil Pattern of TP13 (Supply) Foil Pattern of TP14 (Take Up) (SYSCON BOARD)
ADJUST	DIP SW200 (MECH I/F BOARD)
INPUT	--------------
MODE	EJECT
M.EQ	Oscilloscope VFK1423 (Tape Big./End Det. Cassette)

1. Remove the Bottom Panel.
2. Insert the VFK1423 and measure the voltage at TP13 and TP14.
3. Set the Dip SW200 so that the DV voltage “A” in the specification.



SW1 SW4	SW2 SW4	SW3 SW5	S-PHOTO T-PHOTO	Synthetic Resistance
1	1	1	A Voltage	420Ω
0	1	1	UP	460Ω
1	0	1	↑	660Ω
0	0	1		750Ω
1	1	0		880Ω
0	1	0	↓	1050Ω
1	0	0	A Voltage	3300Ω
0	0	0	DOWN	8200Ω

***:** 1=ON, 0=OFF

4. SERVO

4-1. Motor Torque Offset Adjustment

BOARD	SERVIO (F1)
SPEC.	15 ± 2grcm (5 times average)
TEST	Connect Monitor TV to VIDEO OUT3
ADJUST	A03:T-REEL TRQ A04:S-REEL TEQ (EVR on Service Menu)
INPUT	-------------
MODE	EJECT
TAPE	No Tape
M.EQ	VFK1191 (Dial Torque Gauge) VFK1152 (Dial Torque Gauge Adapter)

1. Set the REEL TABLE to M-cassette position.
2. Remove the Front Loading Unit with the connection cable or remove the Top Plate of Front Loading Unit, which is fixed by 6 screws.
3. Open the SERVO ADJUST menu on the Service menu and select the item “ A03:T REEL TRQ “.
4. Set a Dial Torque Gauge to top of Take-up Reel Table.
5. Press the SEARCH button at 5 times and measure the value of Dial Torque Gauge at 5 times, then calculate the average and adjust EVR “T REEL TRQ” so that the average is in the specification.

Note: While press the SEARCH button, the REEL Table is rotated

6. Select the item “ A04:S REEL TRQ ”.
7. Set a Dial Torque Gauge to top of Take-up Reel Table.
8. Press the SEARCH button at 5 times and measure the value of Dial Torque Gauge at 5 times, then calculate the average and adjust EVR “S REEL TRQ” so that the average is in the specification.

5.EQ and RF Adjustment

EQ and RF adjustment can be executed by RF AUTO EQ software and RF AUTO ADJUSTMENT TOOL. This Service Manual mention of auto adjust procedure and manual adjustment procedure.

5-1. AUTO ADJUSTMENT PROCEDURE

5-1-1. Preparation and Connection of Auto EQ Adjustment Tool

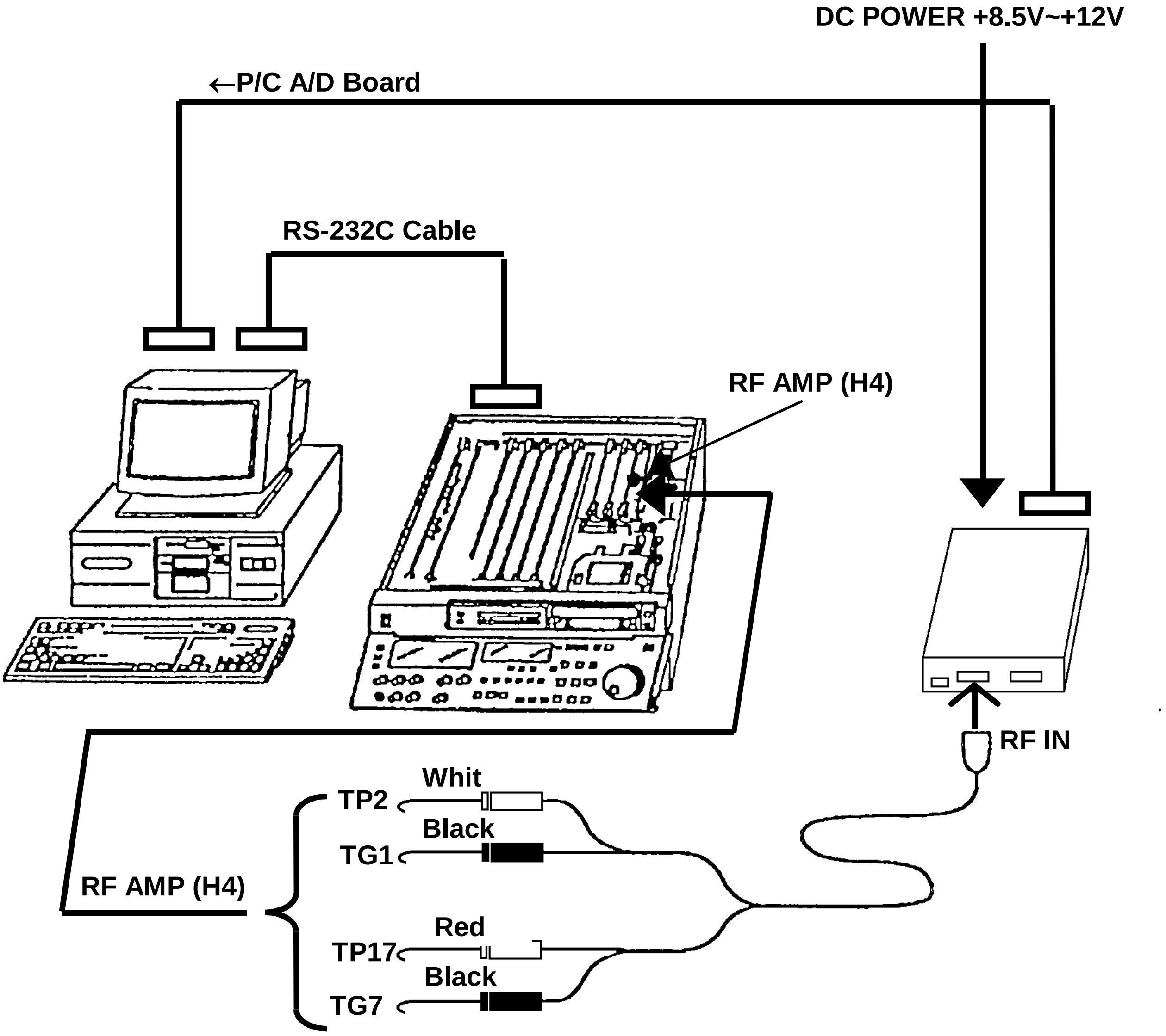
Test Point	TP2:PB HSW, TG1:GND (RF AMP Board:H4) TP17:PB ENV, TG7:GND (RF AMP Board:H4)
Equipment	• RF Auto Adjustment Tool(VFK1163) * This Tool attached 2 kinds of cable • RF Adjustment Software(VFK1160C) • IBM PC Compatible (486/66MHz or greater) • DAQ-12 A/D Card (Quatech): * This Board is install to PC as same as LISTA ADJ. • DC Power Supply (+8.5V to +12V) • RS-232C Cable (type of Cross cable)
Tape	**NTSC:** VFM3580KM(DVCPRO), VFM3010EDS (DV) **PAL:** VFM3680KM(DVCPRO), VFM3110EDS (DV) Self-recording and Playback Tape

1. Supply DC Voltage(+8.5 to +12V) to EQ Tool. RF Adjustment Tool requires DC power supply (+8.5V to +12V). Use DC power supply or AC Adaptor movie like “ VW-AMC1 “.
2. Connect the extension board with RF AMP (H4) board and connect the clip of cable from EQ tool to Test Point follow as below table on the RF AMP P.C.Board.

WHITE CLIP	TP2	RED CLIP	TP17
BLACK CLIP	TG1	BLACK CLIP	TG7

3. Connect the 62 pin D-Sub connector of cable from EQ tool to A/D Board of PC.
4. Connect the RS232C cable to between VTR and PC.

Connection


DC POWER +8.5V~+12V
←P/C A/D Board
RS-232C Cable
RF AMP (H4)
RF IN
Whit
TP2
Black
TG1
RF AMP (H4)
Red
TP17
Black
TG7

Initial Setting

< Setting of VTR >

1. Open the Set Up Menu in User mode (do not use Service Mode) and confirm the menu is in <USER1> and set the RS-232C mode as shown below.

204	RS232C SEL	ON
205	BAUD RATE	9600
206	DATA LENGTH	8
207	STOP BIT	1
208	PARITY	NON
209	RETURN ACK	ON

2. Press SET button after setting the above items.
3. Set the LOCAL / REMOTE SW to REMOTE side.
4. Set the service switch (DIP SW 1-1: located at bottom side of front panel) to on position.

During Automatic EQ adjustment, adjustment is done with ALIGNMENT tape, so rewind the necessary amount of adjustment tape (DVCPRO MASTER and DV MASTER tape) before boot up the EQ automatic adjustment software.

NOTE: When the VTR detected tape end position during adjustment, rewind the tape automatically to tape beginning position and continuation of adjustment.

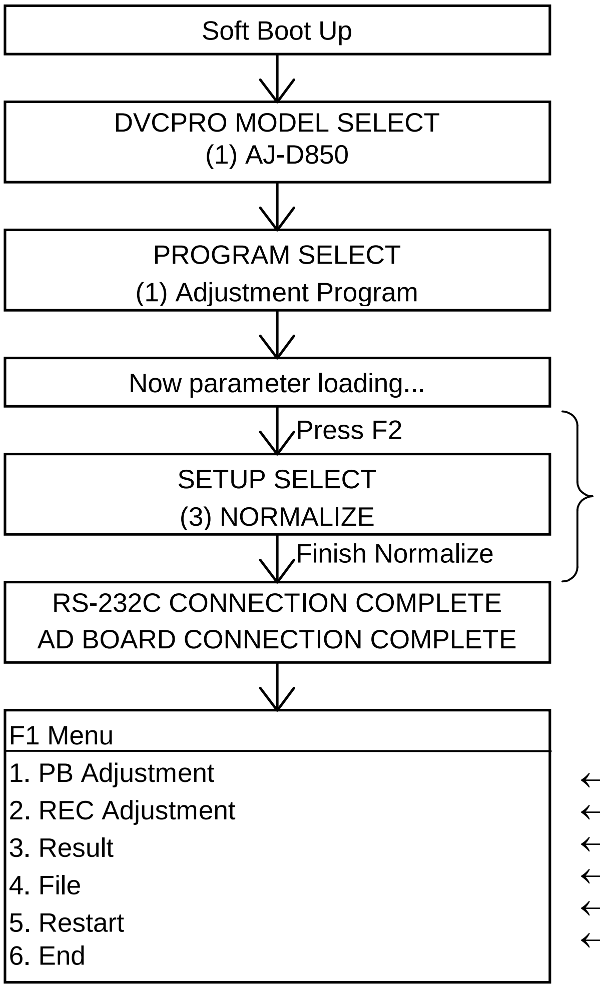
Boot Up the RF Automatic Adjustment Software.

1. Boot Up the EQ Adjustment software after setting and connection.

   ☆ Install and boot up

   Copy the all files in the floppy disk of EQ adjustment software to hard disk (for example as directly “RF ADJ“: C:\RFADJ).

   Executive file is DVCRF, so type “DVCRF” and press Enter, then boot up Auto EQ software.
2. Before boot up software, please confirm the tape does not into VTR and LOCAL/REMOTE switch on the front panel set to REMOTE side.
3. After boot up software, appear the message “DVCPRO MODEL SELECT “ on the screen, then select the model. In case of the AJ-D850, select the item “(1) AJ-D850”.
4. Next select item “(1) Adjusting Program” on the “PROGRAM SELECT “ menu.
5. After item 4 the parameter loading menu is appeared and wait about 20 second. This waiting time can be skipped by pressing ENTER key. Then “RS-232C CONNECTION COMPLETE”, “AD BOARD CONNECTION COMPLETE” messages and Main Menu are appeared.


Soft Boot Up
DVCPRO MODEL SELECT
(1) AJ-D850
PROGRAM SELECT
(1) Adjustment Program
Now parameter loading...
Press F2
SETUP SELECT
(3) NORMALIZE
Finish Normalize
RS-232C CONNECTION COMPLETE
AD BOARD CONNECTION COMPLETE
F1 Menu
1. PB Adjustment
2. REC Adjustment
3. Result
4. File
5. Restart
6. End

This function is used when the EQ Tool is used first time. Also we recommend to perform it regularly.
(Explanation is on the next page)

← DVCPRO and DV PB ADJ.
← DVCPRO REC ADJ
← Display of EVR and Error rate data
← Save and Load of data
← Re-start of EQ software
← Escape to DOS mode

```
Command>Please Select No.!!!!
```

☆Normalize of RF AUTO ADJUSTMENT TOOL

Press <F2> enter to SET UP, then appeared display as below.

```
                    SETUP SELECT

                     (1) RS-232C
                     (2) AD
                     (3) NORMALIZE
                     (4) PRGKIND
                     (5) END

  INPUT No!! or Select by cursor Key (U/D) and hit RETURN
```

Please select the “(3) NORMALIZE”, and press Enter key, then appeared message “Play back the DVCPRO MASTER TAPE, Then PRESS ENTER Key“.

Insert DVCPRO color bar alignment tape and press Enter key, then measurement value appeared as indicated as below.

```
                       Tool BOX Normalizing

                5MHz BPF   10MHzBPF    20MHzBPF     APF
USER DATA       0.025028    0.032613    0.030525   0.011855
DEFAULT DATA    0.028084    0.031761    0.030125   0.011872

                    Normalizing Again? [Y/N]
```

When you use RF Adjustment Tool first time, please confirm that the value of USER DATA and DEFAULT DATA, which should be difference within +/- 0.01.

When performing this normalization regularly under condition of the same combination of the PC, A/D Board and EQ Tool, the difference of USER DATA and DEFAULT DATA should be with in +/- 0.005.

If USER DATA value is became out of spec, RF Adjustment Tool (VFK1163) have a problem.

In case of the data within spec, please select the “N”, the appear the massage below.

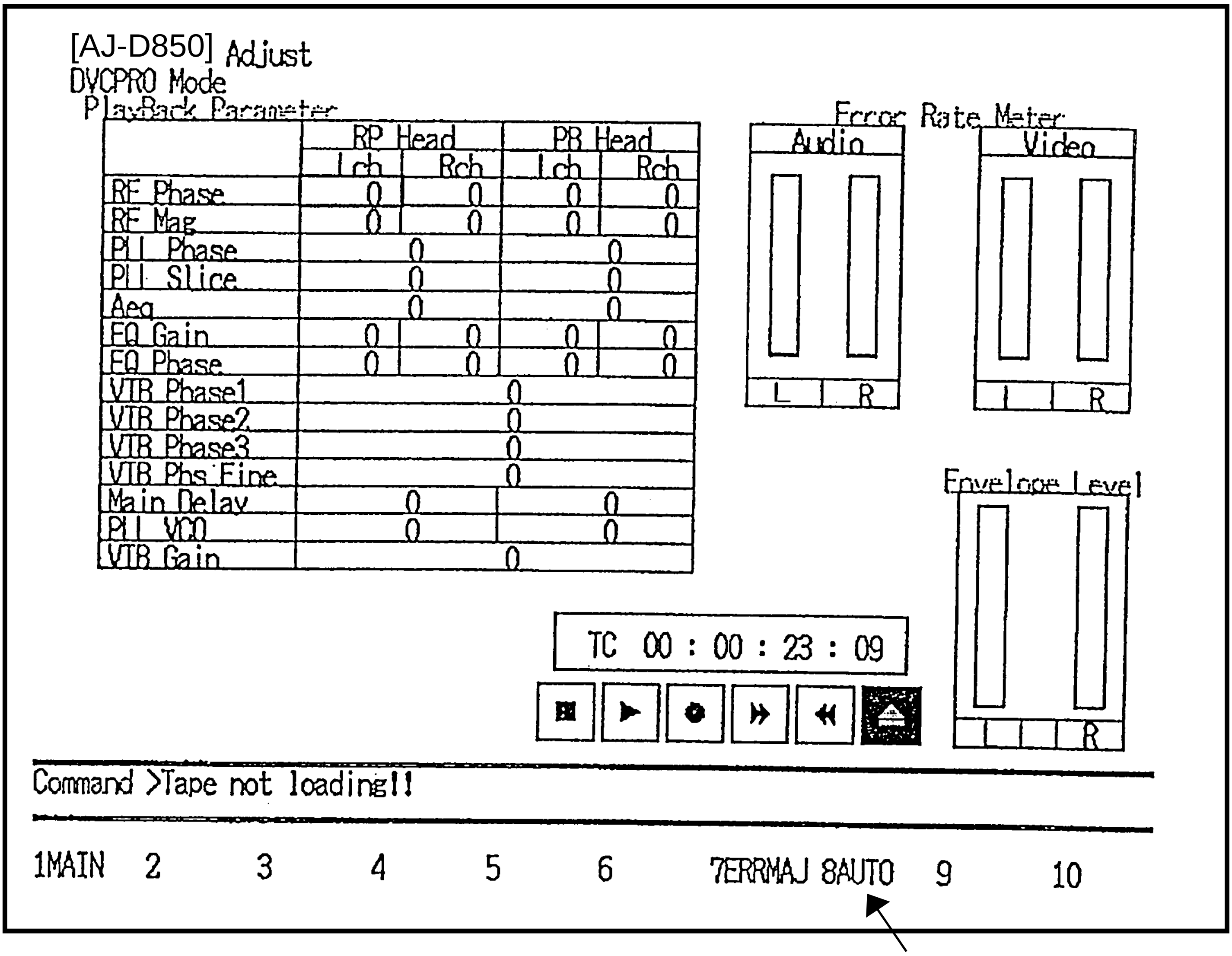
```
Please Select (U)ser / (D)efault!
```

Please select “U”, then appeared SETUP SELECT Menu.

Eject the tape and select “(5) END”, then the screen return to parameter loading.

5-1-2. DVCPRO Playback Adjustment

1. Select “1. PB Adjustment” in the Main Menu.
2. Adjustment menu is appeared. “Tape not loading !!” message is appeared, press F8 key (AUTO) for automatic adjustment. The bottom numbers show the Function keys.


[AJ-D850] Adjust
DVCPRO Mode
PlayBack Parameter

	RP Head		PB Head	
	Lch	Rch	Lch	Rch
RF Phase	0	0	0	0
RF Mag	0	0	0	0
PLL Phase	0		0	
PLL Slice	0		0	
Aeq	0		0	
EQ Gain	0	0	0	0
EQ Phase	0	0	0	0
VTR Phase1	0			
VTR Phase2	0			
VTR Phase3	0			
VTR Phs Fine	0			
Main Delay	0		0	
PLL VCO	0		0	
VTR Gain	0			

TC 00 : 00 : 23 : 09

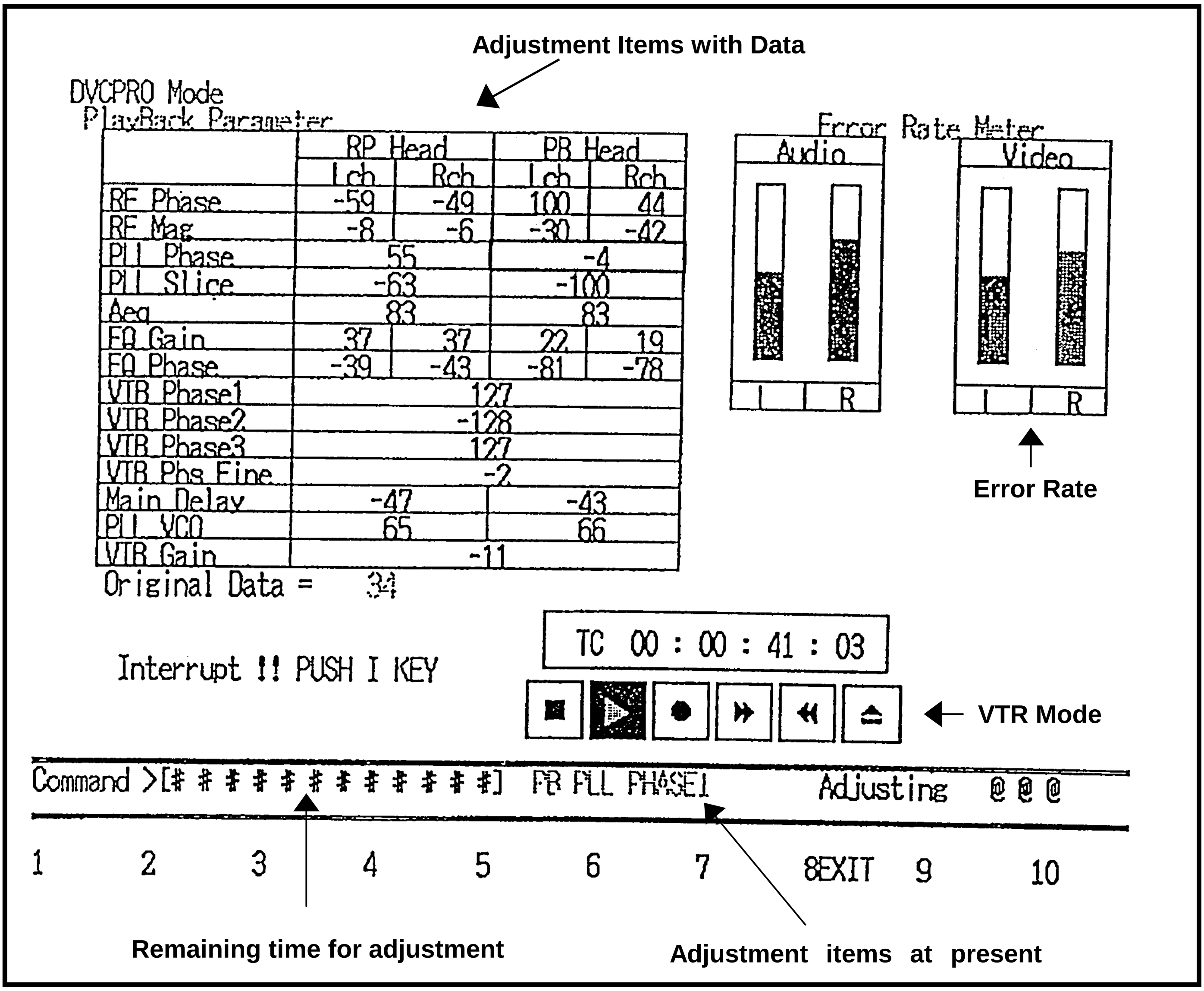
Command >Tape not loading!!

Error Rate Meter
Audio
L
R
Video
L
R
Envelope Level
R
1MAIN
2
3
4
5
6
7ERRMAJ
8AUTO
9
10

F8 KEY (AUTO ADJ)

3. In the SELECT MENU, select “1. ALL Adjustment”.
4. Then the message of “PLEASE INSERT DVCPRO MASTER TAPE” is appeared in the former adjustment menu, insert DVCPRO MASTER (VFM3580KM : NTSC) or (VFM3680KM : PAL).

5. The following picture is appeared and automatic adjustment is started. During automatic adjustment, do not touch VTR and PC.
6. Adjustment is completed in 7 or 8 minutes. Then DV Playback adjustment is started. At bottom of the screen, “Please insert DV master Tape” is displayed.



Adjustment Items with Data

DVCPRO Mode
PlayBack Parameter

	RP Head		PB Head	
	Lch	Rch	Lch	Rch
RF Phase	-59	-49	100	44
RF Mag	-8	-6	-30	-42
PLL Phase	55		-4	
PLL Slice	-63		-100	
Aeq	83		83	
EQ Gain	37	37	22	19
EQ Phase	-39	-43	-81	-78
VTR Phase1	127			
VTR Phase2	-128			
VTR Phase3	127			
VTR Phs Fine	-2			
Main Delay	-47		-43	
PLL VCO	65		66	
VTR Gain	-11			

Original Data = 34

Interrupt !! PUSH I KEY

TC 00 : 00 : 41 : 03

Command >[# # # # # # # # # # # #] PB PLL PHASE1 Adjusting @ @ @

1 2 3 4 5 6 7 8EXIT 9 10

Error Rate

VTR Mode

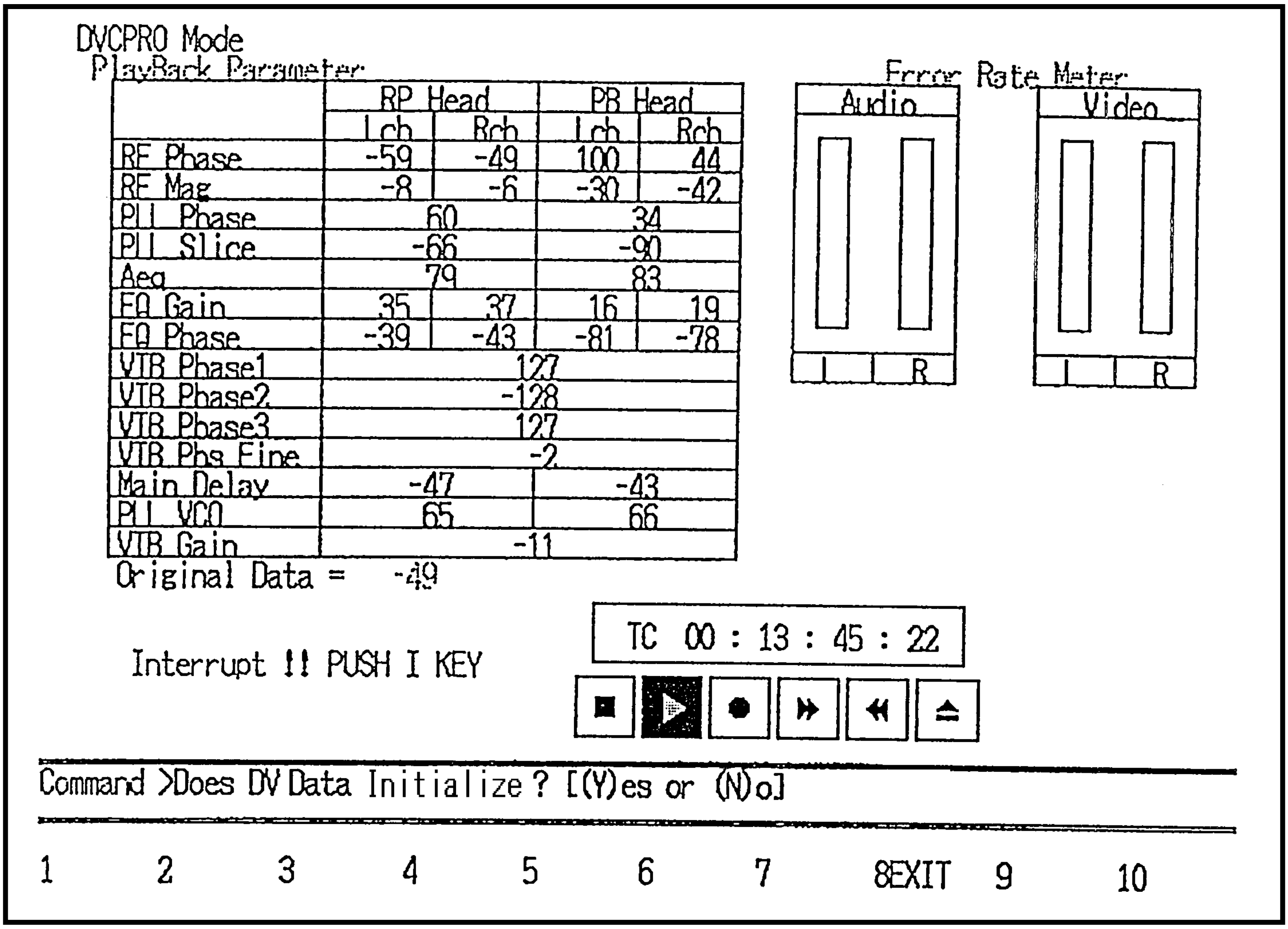
Remaining time for adjustment

Adjustment items at present

5-1-3. DV (Consumer) Playback Adjustment

This adjustment is done following DVCPRO Playback adjustment.

1. Tape is automatically ejected after DVCPRO Playback Adjustment. Insert DV MASTER Tape when “Please Insert DV MASTER” message is appeared.
2. When “DV Data Initialize?” [(Y)es or (N)o]” message is appeared, select N.
3. DV Playback automatic adjustment is started.
   During automatic adjustment, do not touch VTR and PC.



DVCPRO Mode

PlayBack Parameter

	RP Head		PB Head	
	Lch	Rch	Lch	Rch
RF Phase	-59	-49	100	44
RF Mag	-8	-6	-30	-42
PLL Phase	60		34	
PLL Slice	-66		-90	
Aeq	79		83	
EQ Gain	35	37	16	19
EQ Phase	-39	-43	-81	-78
VTR Phase1	127			
VTR Phase2	-128			
VTR Phase3	127			
VTR Phs Fine	-2			
Main Delay	-47		-43	
PLL VCO	65		66	
VTR Gain	-11			

Original Data = -49

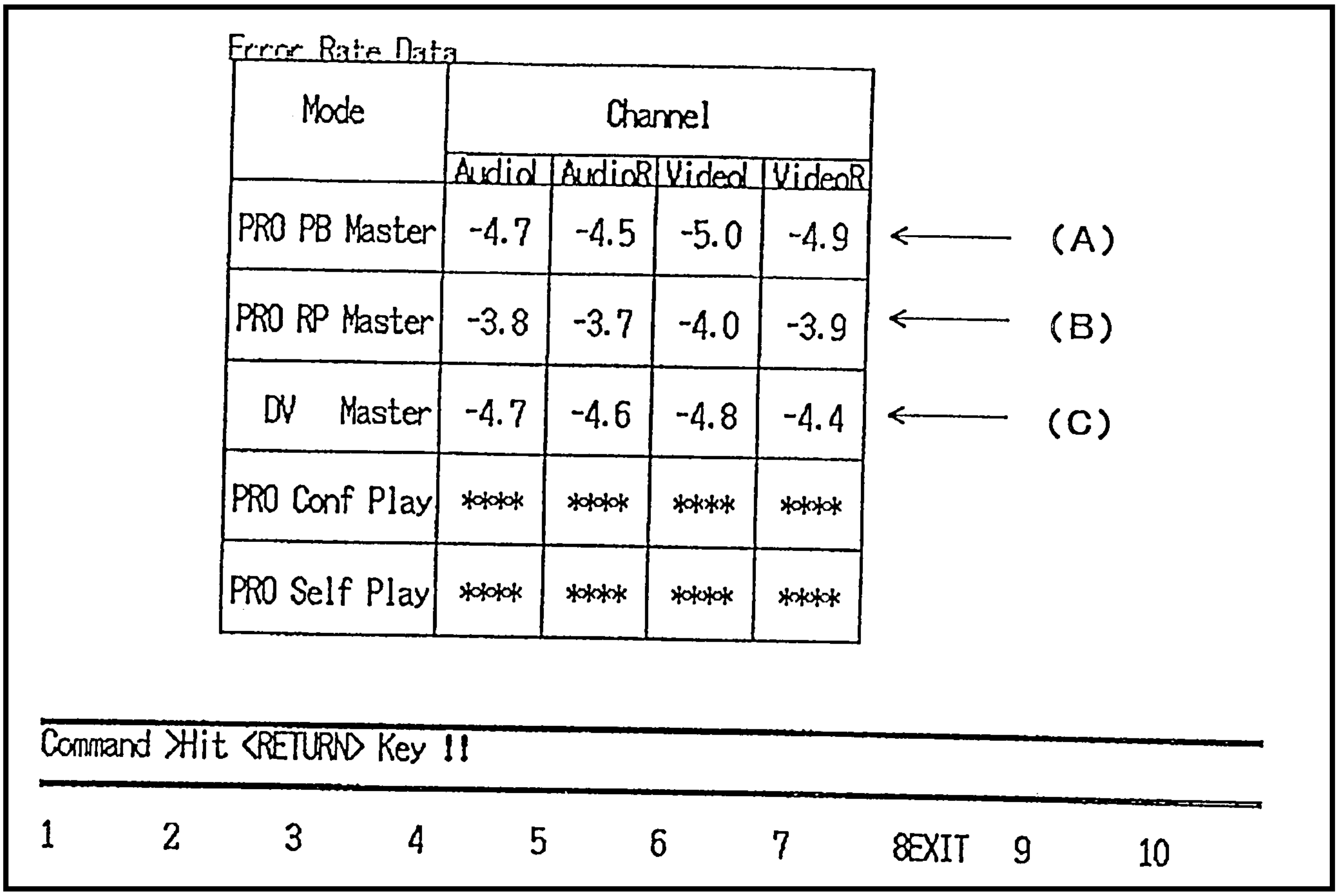
Interrupt !! PUSH I KEY

TC 00 : 13 : 45 : 22

Command >Does DV Data Initialize ? [(Y)es or (N)o]

5-1-4. Confirmation of Error Rate (PLAYBACK)

1. After DVCPRO and DV Playback adjustment, measured error rate is automatically displayed as shown below.



Error Rate Data

Mode	Channel			
	Audio L	Audio R	Video L	Video R
PRO PB Master	-4.7	-4.5	-5.0	-4.9
PRO RP Master	-3.8	-3.7	-4.0	-3.9
DV Master	-4.7	-4.6	-4.8	-4.4
PRO Conf Play	****	****	****	****
PRO Self Play	****	****	****	****

```
Command >Hit <RETURN> Key !!
1    2    3    4    5    6    7    8EXIT    9    10
```

2. Confirm the numbers at (A), (B) and (C) they are displayed in Green.
   If the color is red the error rate is too high.
   Especially the numbers at (A) and (C) must be Green. If part of row of (B) is red, clean the head and the tape transportation and re-adjust the DVCPRO RP Playback adjustment.

<Procedures>

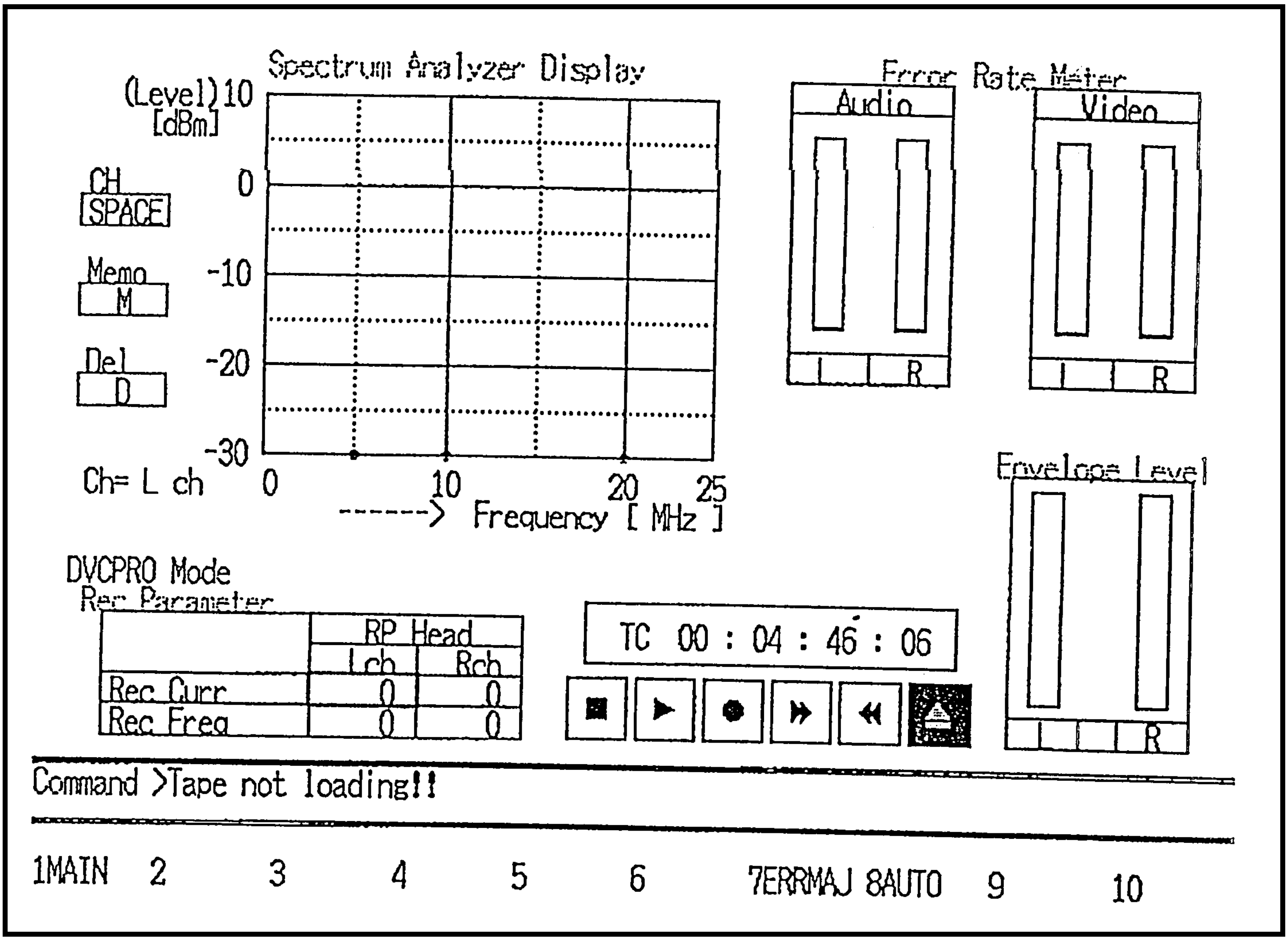
1. If Return key is pressed, Select Menu is displayed and select “3. DVCPRO RP ONLY Adjustment”. Then follow the message on PC and re-adjust RP mode only.
2. After adjustment error rate is automatically displayed.

Confirm the error rate and if they are correct, do the next adjustment.

5-1-5. DVCPRO Recording Adjustment

Start the DVCPRO Recording Adjustment after Playback Adjustment and Error Rate Confirmation.

1. Return to Main Menu. Press Enter key on the Error Rate Display Menu and open the Sub menu.
2. Select “6. Return to manual” and press F1 key (MAIN) and return to Main Menu.
3. Select “2. REC Adjustment” and following “REC Adjustment “ menu is appeared.


Spectrum Analyzer Display
(Level) 10
[dBm]
0
-10
-20
-30
CH
SPACE
Memo
M
Del
D
Ch= L ch
0
10
20
25
------> Frequency [MHz]
Error Rate Meter
Audio
Video
L
R
L
R
Envelope Level
L
R
DVCPRO Mode
TC 00 : 04 : 46 : 06
1MAIN
2
3
4
5
6
7ERRMAJ
8AUTO
9
10

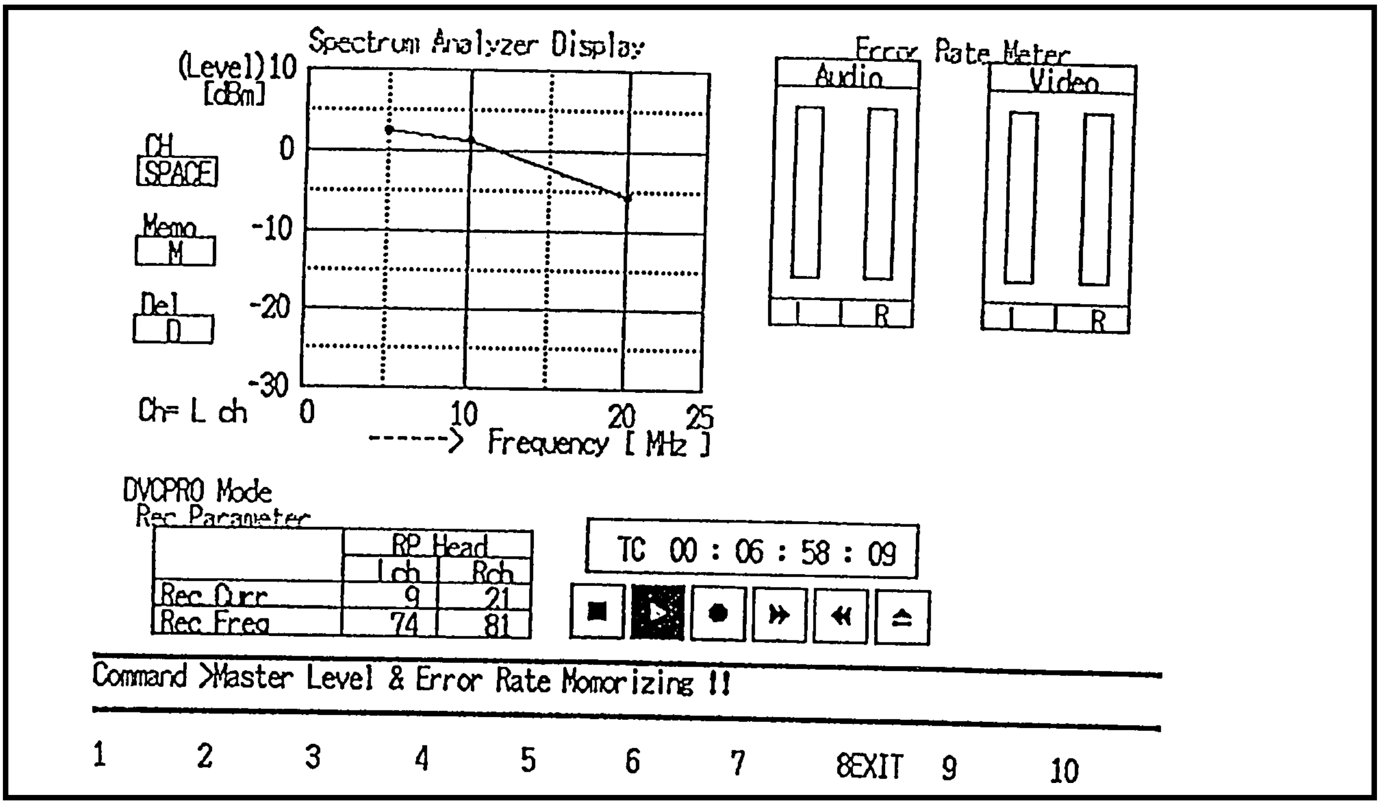
Rec Parameter

	RP Head	
	Lch	Rch
Rec Curr	0	0
Rec Freq	0	0

Command >Tape not loading!!

4. Tape not loading message is appeared. For the automatic adjustment press F8 key (AUTO).
5. Select “1. Adjust start” in the Sub Menu.
6. The messaged of “Please Insert DVCPRO MASTER TAPE (COLOR BAR)” is appeared, and insert the DVCPRO color bar master tape. After inserting the master tape, Master level and error rate level are automatically memorized.

7. During data memorizing, following menu is appeared and waveform is appeared in the Spectrum Analyzer Display part.


Spectrum Analyzer Display
(Level) 10
[dBm]
0
-10
-20
-30
CH
SPACE
Memo
M
Del
D
0
10
20
25
------> Frequency [MHz]
Error Rate Meter
Audio
L
R
Video
L
R
1
2
3
4
5
6
7
8EXIT
9
10

Ch= L ch

DVCPRO Mode

Rec Parameter

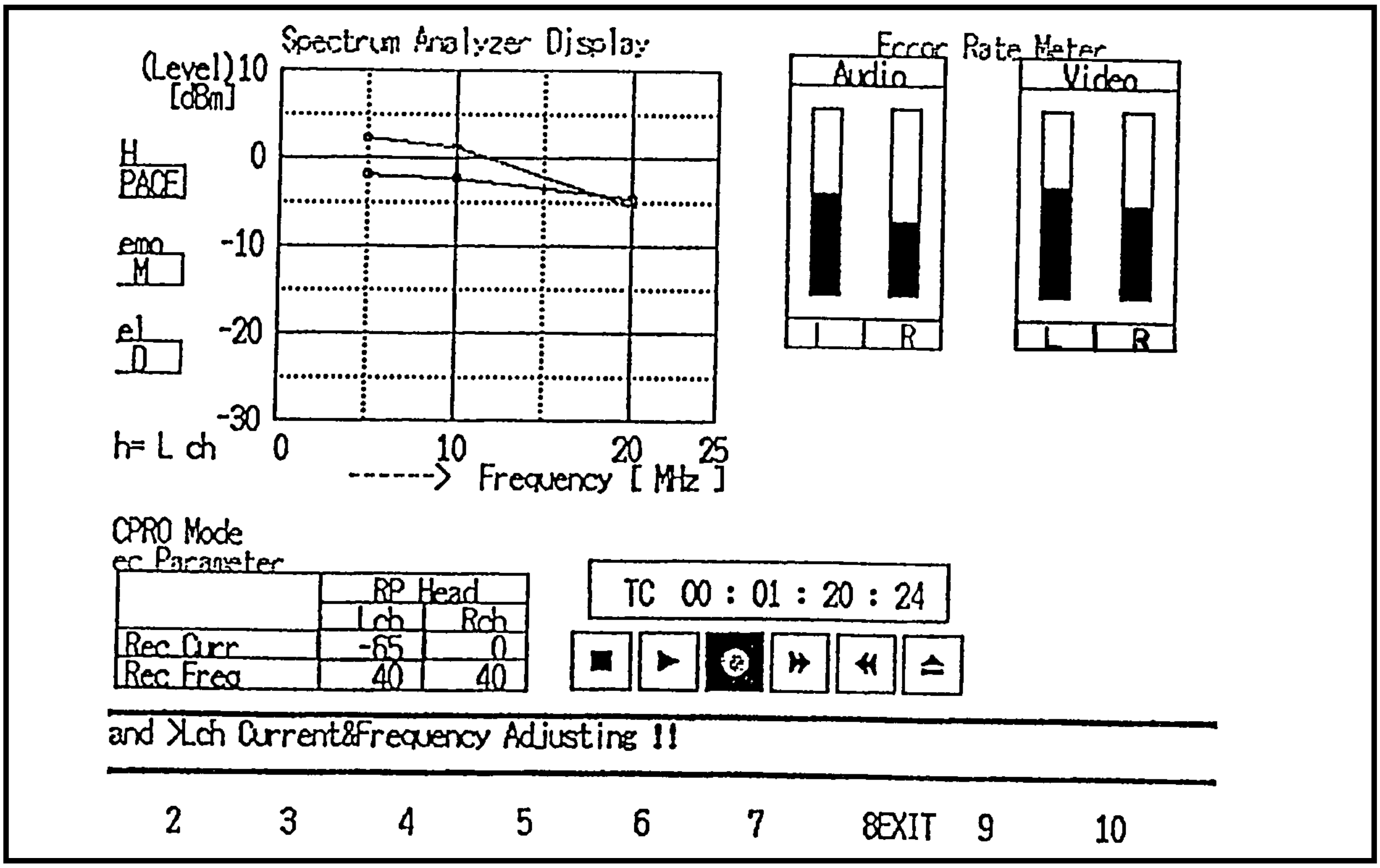
	RP Head	
	Lch	Rch
Rec Curr	9	21
Rec Freq	74	81

TC 00 : 06 : 58 : 09

Command >Master Level & Error Rate Momorizing !!

8. Tape is ejected after completion of Master Tape Data Memorizing, and “Please Insert Blank Tape” message is appeared. Then insert self recording and playback tape.

9. Start the Automatic Adjustment.


Spectrum Analyzer Display
(Level) 10
[dBm]
0
-10
-20
-30
H
PACE
emo
M
el
D
0
10
20
25
------> Frequency [MHz]
Error Rate Meter
Audio
L
R
Video
L
R
2
3
4
5
6
7
8EXIT
9
10

h= L ch

CPRO Mode

ec Parameter

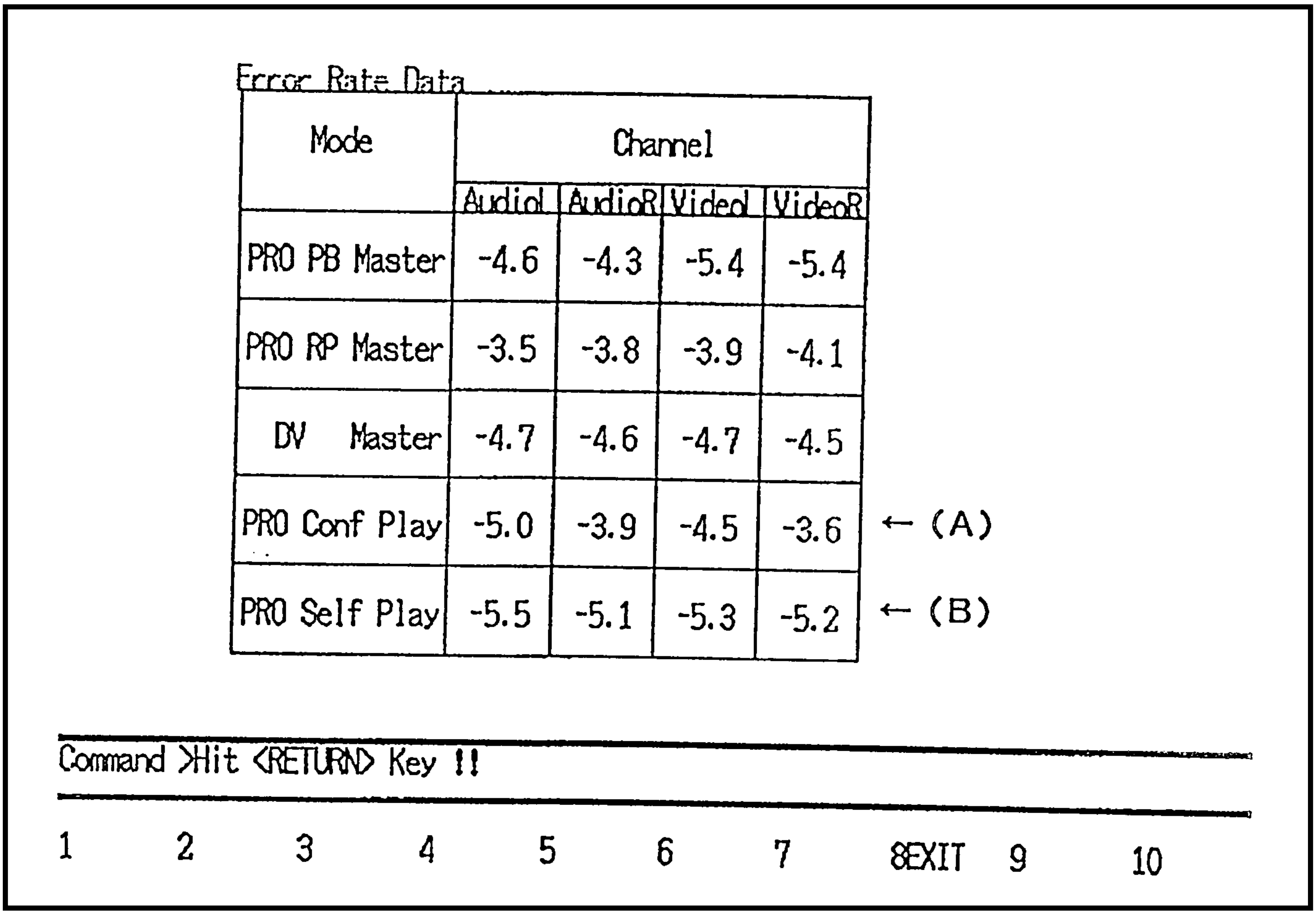
	RP Head	
	Lch	Rch
Rec Curr	-65	0
Rec Freq	40	40

TC 00 : 01 : 20 : 24

and >Lch Current&Frequency Adjusting !!

5-1-6.Confirmation of Error Rate (REC)

10. After completion of Automatic Adjustment “<Return> to NEXT STEP” message is appeared, the press Return (ENTER) key.
11. “Please Adjust VC600 and VC601 Trimmer Volume and Minimize Error Rate !!” message is appeared. At this menu, observe the error rate at upper right part of the screen and if the error rate is too high (RED color display), adjust manually VC600 and VC601 on the RF AMP (H4) BOARD. If the error rate display changed to green, press Return (ENTER) key.
12. Automatically goes to Error Rate measurement mode and “Error Rate Checking !!” message is displayed.
13. Error rate is displayed and completion of measurement.



Error Rate Data

Mode	Channel				
	AudioL	AudioR	VideoL	VideoR	
PRO PB Master	-4.6	-4.3	-5.4	-5.4	
PRO RP Master	-3.5	-3.8	-3.9	-4.1	
DV Master	-4.7	-4.6	-4.7	-4.5	
PRO Conf Play	-5.0	-3.9	-4.5	-3.6	← (A)
PRO Self Play	-5.5	-5.1	-5.3	-5.2	← (B)

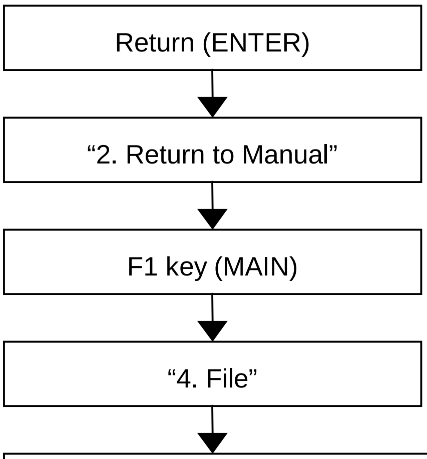
Command >Hit <RETURN> Key !!

14. The row of (A) shows the error rate for confidence playback, the row of (B) shows the error rate for self recording and playback. Confirm the numbers are displayed in Green color.

Save RF Data and Error Rate Data

RF Adjustment result data and error rate data can be saved.

1. Return to MAIN Menu from Recording Adjustment menu.
2. The procedures are show below.

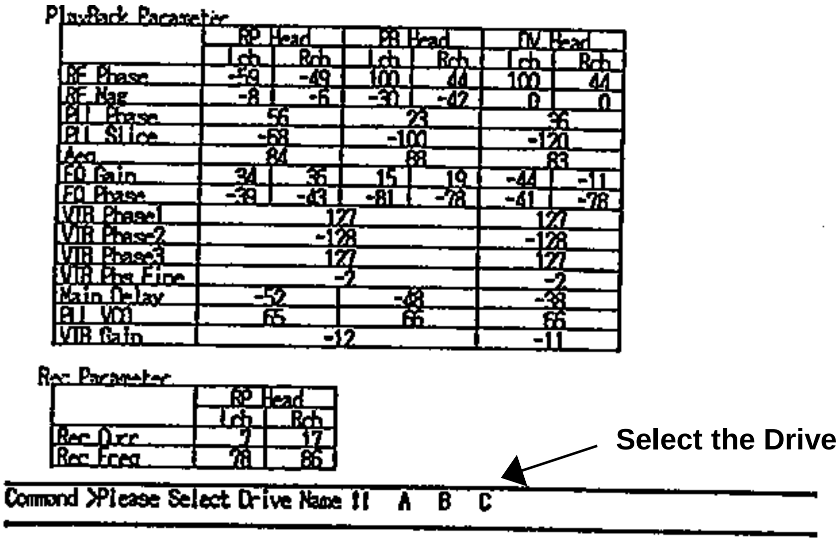


PB Auto Menu

1. EVR Down Load (DECK)
2. EVR UPLoad (DECK)
3. EVR FileLoad (DISK)
4. EVR FileSave (DISK)
5. ERR FileSave (DISK)
6. Return To Main

Command>Please Select No!!!!

3. item 3 is EVR data loading, item 4 is EVR data saving and item 5 is Error rate data saving.



PlayBack Parameter

	RP Head		PB Head		DV Head	
	Lch	Rch	Lch	Rch	Lch	Rch
RF Phase	-59	-49	100	44	100	44
RF Mag	-8	-6	-30	-42	0	0
PLL Phase	56		23		36	
PLL Slice	-68		-100		-120	
Agc	84		68		83	
EQ Gain	34	35	15	19	-44	-11
EQ Phase	-39	-43	-81	-78	-41	-78
VTR Phase1	127				127	
VTR Phase2	-128				-128	
VTR Phase3	127				127	
VTR Phs Fine	-2				-2	
Main Delay	-52		-48		-38	
PLL VCO	65		66		66	
VTR Gain	-12				-11	

Rec Parameter

	RP Head	
	Lch	Rch
Rec Curr	7	17
Rec Freq	78	86

Commond >Please Select Drive Name !! A B C

Select the Drive

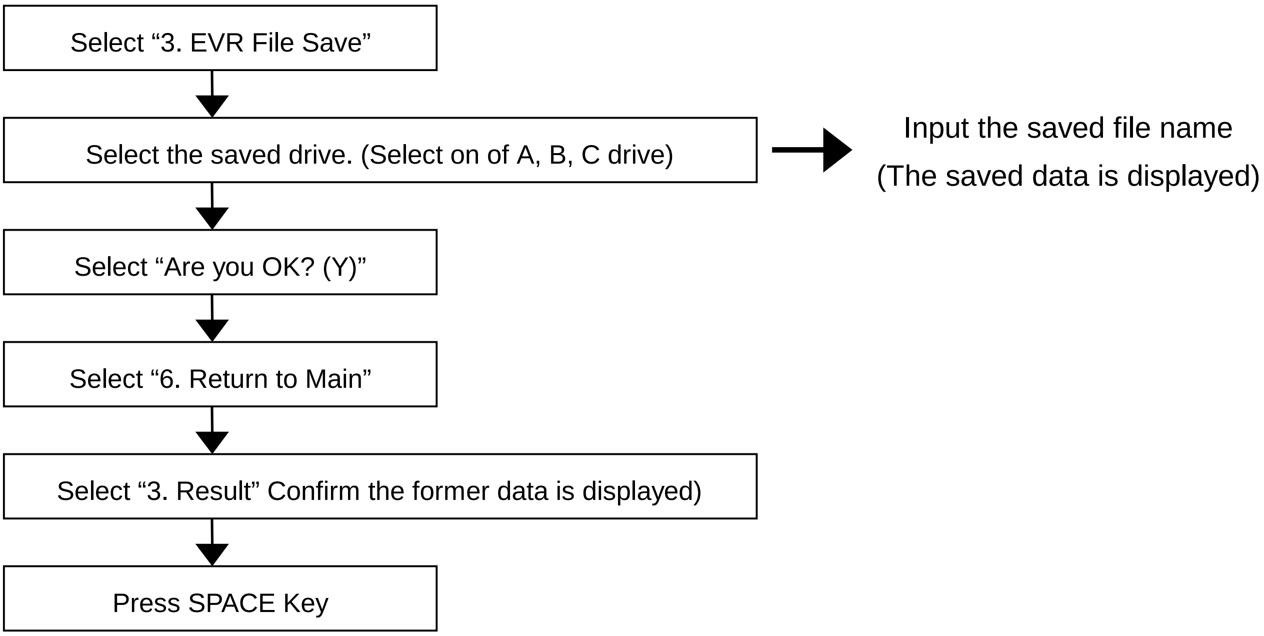
<< EVR File Save >>

1. Select “4. EVR File Save”. All parameters are displayed and select the drive for data saving.
2. Enter the file name and comment after selecting the drive. File name must be in 8 characters, and comment is must be in 20 characters. The adjustment data for VTR can be managed same as linearity data. After enter the File name and comment, Sub-menu is automatically displayed. Then save the EVR data.

<< EVR File Load >>

1. Select “3. EVR File Load (DISK) for reading the EVR data from PC.
2. Select the drive follow the screen message input the saved filename, then EVR data displayed on the screen.
3. When escape from this EVR data display, press “Y” key follow the message “Are You OK“, then return to Sub-menu (File selected menu)

Sub-menu after item 7


Select “3. EVR File Save”
Select the saved drive. (Select on of A, B, C drive)
Input the saved file name
(The saved data is displayed)
Select “Are you OK? (Y)”
Select “6. Return to Main”
Select “3. Result” Confirm the former data is displayed)
Press SPACE Key

<< Save the Error Data >>

1. Displayed PB Auto Menu as the same as step of introduction <<Save and Reading the EVR Data>>.
2. Select “5. ERR File Save“ on the PB Auto menu.
3. The Error rate data is saved to same directly as AUTO EQ software, which is file “ERRDATA.DAT” Therefore it file can only entry the comment.
4. After input comment, Auto EQ software is executed saving operation and return to PB Auto menu.

<< Load the Error Data >>

1. The saved Error data file read on the Editor after return to Dos mode.
2. The contents of Error data file, which display from left side on the screen "date of saving (month/day/year), comment and error data.".
3. Order to display of Error data from left side, which display as numerical value of upper left (PRO PB MASTER – Audio L) on the error rate table of Auto EQ software display and next to right numerical value displayed. And next row of numerical value (PRO RP MASTER – Audio L) displayed from left to right direction. Therefore most of right side of numerical value on Editor display, which is numerical value of "PRO Self Play – Video R".

<< EVR Up Load >>

When EVR file data load to VTR from PC. First EVR file load have to executed follow the procedure on previous page.

1. Select the item "2 EVR UP Load" and press "U" Key follow the message "(D)efault or (U)ser Data Up Load".
2. After press "U" button appear the message "Up Load Complete!! Are You OK? [(Y)es or (N)o]", then press (Y) button for up load EVR data to VTR.

<< EVR Down Load >>

Note: The EVR data keep on EQ software until escape DOS mode after Auto EQ adjustment finished. Therefore if you want to save EVR data without execute Auto EQ adjustment, necessary EVR Down Load operation.

1. Select the item "2.EVR Down Load" and press "U" Key follow the message "(D)efault or (U)ser Down Load".
2. After press "U" button appear the message "Down Load Complete!! Are You OK? [(Y)es or (N)o]", then press (Y) button for EVR data down load to PC from VTR.

After finish EVR Down Load, perform "EVR File Save" for file save to disk drive follow the follow the procedure on previous page.

5-2. MANUAL ADJUSTMENT PROCEDURE

NOTE: Setting of Service Menu corresponds to setting of Front switches. (Refer to Error Rate Confirmation Procedure on Section 2.)

RF ADJUSTMENT

5-2-1. Pre EQ Adjustment

BOARD	RF AMP board (H4)
SPEC.	2.5VDC ± 0.2V(DVCPRO) 2.0+0.5V(DV)
TEST	TP20, TP18,TP1 and TP2 (Trigger)
ADJUST	C09:RP MAG L, C10:RP MAG R, C13:PB MAG L, C14:PB MAG R (EVR on RF ADJUST menu)
MODE	PLAY
TAPE	DV Alignment tape (NTSC: VFM3010EDS, PAL: VFM3110EDS) DVCPRO Alignment tape (NTSC: VFM3580KM, PAL: VFM3680KM)
M.EQ	Oscilloscope Monitor TV (Connect to VIDEO 3 OUT)

1. Open the RF ADJUST menu on the Service Menu.
2. Connect the Scope to TP1 for trigger.
3. Connect the Scope to TP20 with 10:1 probe and connect the ground to TG9.
4. Playback a colour bar portion of the DV Alignment Tape.
5. Adjust EVR ”C09:RP MAG L” and “C10:RP MAG R” so that the DC voltage is become 2.0V+0.5V.
6. Playback a colour portion of DVCPRO Alignment Tape.
7. Adjust EVR ”C09:RP MAG L” and “C10:RP MAG R” so that the DC voltage is become 2.5V+0.5V.
8. Connect the scope to TP18 with 10:1 probe and connect the ground to TG9.
9. Connect the scope to TP2 for trigger.
10. Adjust EVR ”C13:PB MAG L” and EVR “C14:PB MAG R” so that the DC voltage is become 2.0V+0.5V.

Note: How to adjust the EVR.

(1) Press the MENU button on the front bottom panel, then “Service Menu“ appeared on the screen.

(2) Select the item “ C00: RF ADJUST “ by JOG Dial and press the SET button on the front bottom panel then open “ RF ADJUST “ menu.

(3) Select the adjustment item by JOG Dial, then move The start mark (*) to the adjusting item.

(4) Adjustment became available by pressing JOG/SHTL button, then rotating JOG Dial.

5-2-2. RF AMP PB Phase Adjustment

BOARD	RF AMP board (H4)
SPEC.	Minimum of Error Rate
TEST	Front Display
ADJUST	C07:RP PHASE L, C08:RP PHASE R C11:PB PHASE L, C12:PB PHASE R (EVR on RF ADJUST menu)
MODE	PLAY
TAPE	DV Alignment tape (NTSC: VFM3010EDS, PAL: VFM3110EDS) DVCPRO Alignment tape (NTSC: VFM3580KM, PAL: VFM3680KM)
M.EQ	Monitor TV (Connect to VIDEO 3 OUT)

1. Set the switches as shown below
   Front Bottom CF:4F
2. Open the RF Adjust menu on the Service menu and set as follows.

C20	ERROR MODE	FAST
C19	PB MODE	RP H
C18	VITERBI MODE	ON
C17	CONCEAL MODE	OFF
C16	ECC MODE	AL OFF

3. Playback the DV colour bar portion of Alignment Tape.
4. Adjust EVR “C07: RP PHASE L” and “C08:RP PHASE R” so that the error rate is minimum.
5. Playback the colour bar portion of DVCPRO Alignment tape.
6. Adjust EVR “C07:RP PHASE L” and “C08:RP PHASE R” so that the error rate is minimum.
7. Set the item “C19:PB MODE” to PB H.
8. Adjust “C11:PB PHASE L” and “C12:PB PHASE R” so that the error rate is minimum.

5-3. EQ ADJUSTMENT

5-3-1. PLL Lock Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	-------------
TEST	TP403, Monitor
ADJUST	VR410, B01:PB PLL PHASE, B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV Oscilloscope

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service Menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape and confirm the picture is appeared on the monitor.
4. If picture is not appeared, adjust following items
   (1) Connect the scope to TP403 and adjust VR410 so that the DC voltage is become 2.1VDC.
   (2) Adjust “B01:PB PLL PHASE” and “B02:PB PLL SLICE” so that the picture appears on the monitor.
5. Repeat STOP to PLAY mode, and confirm the Picture is surely appeared every time.

5-3-2. PLL Latch Phase Coarse Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B01:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B01:PB PLL PHASE” so that the video error rate becomes minimum.

5-3-3. PLL Slice Level Coarse Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B02:PB PLL SLICE” so that the video error rate becomes minimum.

5-3-4. EQ Adjustment (1) (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B19:PB MAIN DL (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B19:PB MAIN DL” so that the video error rate is minimum.

5-3-5. EQ Adjustment (2) (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B03:PB AEQ, B04:PB GAIN L, B05:PB PHASE L, B06:PB GAIN R, B07:PB PHASE R (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust each adjustment item so that the each portions error rate becomes minimum as shown in the table.

Procedures	Adjust VR	Error Rate Portion
1	PB AEQ	VIDEO R & L CH
2	PB GAIN L	VIDEO L CH
3	PB PHASE L	VIDEO L CH
4	PB GAIN R	VIDEO R CH
5	PB PHASE R	VIDEO R CH

5-3-6. PLL Latch Phase Fine Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B01:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B01:PB PLL PHASE” so that the video error rate becomes minimum.

5-3-7. PLL Slice Level Fine Adjustment (PB)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B02:PB PLL SLICE” so that the video error rate becomes minimum.

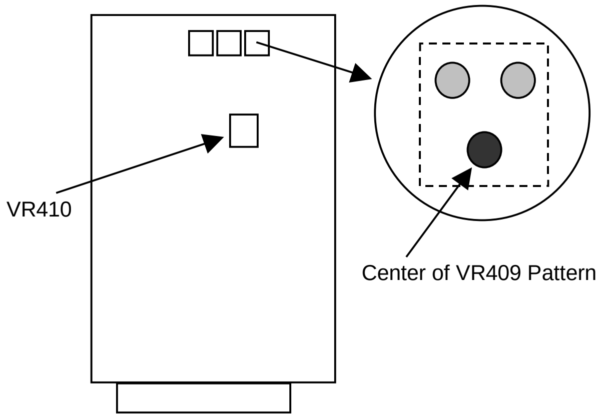
5-3-8. Viterbi A/D Input Level Adjustment

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Center of VR409 pattern Error Rate Level Meter (Front display)
ADJUST	B23:VITABI GAIN, VR801, (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	ON
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B23:VTB GAIN” so that the video error rate becomes minimum.
5. Connect the Electric Volt Meter to “ Center of VR409 Pattern “ as shown as below figure and confirm the DC voltage is 2.1V DC to 2.4VDC. If it is not, adjust VR801.



EQ (H3) Board. Parts side

5-3-9. PLL Lock Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	-------------
TEST	TP203, Monitor TV
ADJUST	VR210, B08:RP PLL PHASE, B09:RP PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape and confirm the picture appears on the monitor.
4. If the picture is not appeared adjust following items.
   (1) Connect the Electric Volt Meter to TP203 and adjust VR210 so that the DC voltage is 2.1VDC.
   (2) Adjust “B08:RP PLL PHASE” and “B09:RP PLL SLICE so that the picture appears on the monitor.
5. Repeat STOP to PLAY and confirm the picture is surely appeared.

5-3-10. PLL Latch Phase Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B08:RP PLL PHASE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B08:RP PLL PHASE” so that the video error rare is minimum.

5-3-11. PLL Slice Level Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B09:RP PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B09:RP PLL SLICE” so that the video error rare is minimum.

5-3-12. EQ Adjustment (1) (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B20:RP MAIN DL (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B20:RP MAIN DL” so that the video error rare is minimum.

5-3-13. EQ Adjustment (2) (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B10:RP AEQ, B11:RP GAIN L, B12:RP PHASE L, B13:RP GAIN R B14:RP PHASE R (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust the each EVR so that the error rate is minimum.

Procedures	Adjust VR	**Correspond of Error Rate Portion**
1	RP AEQ	VIDEO R & L CH
2	RP GAIN L	VIDEO L CH
3	RP PHASE L	VIDEO L CH
4	RP GAIN R	VIDEO R CH
5	RP PHASE R	VIDEO R CH

5-3-14.PLL Latch Phase Fine Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B08:RP PLL PHASE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust RP PLL PHASE so that the error rate is minimum.

5-3-15. PLL Slice Level Fine Adjustment (R/P)

BOARD	EQ Board (H3)
SPEC.	Error Rate minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B09:RP PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	NTSC: VFM3580KM PAL: VFM3680KM
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B09:RP PLL SLICE” so that the error rate is minimum.

5-3-16. PLL Lock Confirmation (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	-------------
TEST	Monitor TV
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode on VTR.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape and confirm the picture appears on the monitor.
   If picture is not appeared adjust “B02:PB PLL SLICE.” so that the picture appears on the monitor.
4. Repeat STOP to PLAY and confirm the picture is surely appeared.

5-3-17. PLL Slice Level Coarse Adjustment (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B02:PB PLL SLICE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B02:PB PLL SLICE”, so that the video error rate is minimum.

5-3-18. EQ Adjustment (1) (Consumer DV)

BOARD	EQ (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B19:PB MAIN DL (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B19:PB MAIN DL” so that the video error rate is minimum.

5-3-19. EQ Adjustment (2) (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B03:PB AEQ, B04:PB GAIN L, B05:PB PHASE L, B06:PB GAIN R, B07:PB PHASE R (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust each EVR so that the error rate is minimum.

Procedures	**Adjust VR**	**Correspond of Error Rate Portion**
1	PB AEQ	VIDEO R & L CH
2	PB GAIN L	VIDEO L CH
3	PB PHASE L	VIDEO L CH
4	PB GAIN R	VIDEO R CH
5	PB PHASE R	VIDEO R CH

5-3-20. PLL Slice Level Fine Adjustment (Consumer DV)

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B08:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	RP H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Adjust “B08:PB PLL SLICE” so that the video error rate becomes minimum.

5-3-21. Consumer DV Viterbi Confirmation

BOARD	EQ Board (H3)
SPEC.	Error Rate Minimum
TEST	Error Rate Level Meter (Front display)
ADJUST	B23:VTB GAIN, B01:PB PLL PHASE (EVR on EQ ADJUST menu)
INPUT	-------------
MODE	PLAY
TAPE	(Consumer DV Alignment Tape) NTSC:VFM3010EDS, PAL:VFM3110EDS
M.EQ	Monitor TV

1. Set the Error Rate display mode.
2. Open the EQ ADJUST menu on Service menu and set as follows.

B28	ERROR MODE	FAST
B27	PB MODE	PB H
B26	VITERBI MODE	OFF
B25	CONCEAL MODE	OFF
B24	ECC MODE	AL OFF

3. Playback the Alignment tape.
4. Confirm the error rate is improved by Viterbi on. The improvement can be confirmed by the error rate meter decrease 5 scale on the front audio meter.
5. If the error rate is not improved so much, adjust “B23:VTB GAIN” and “B01:PB PLL PHASE”.

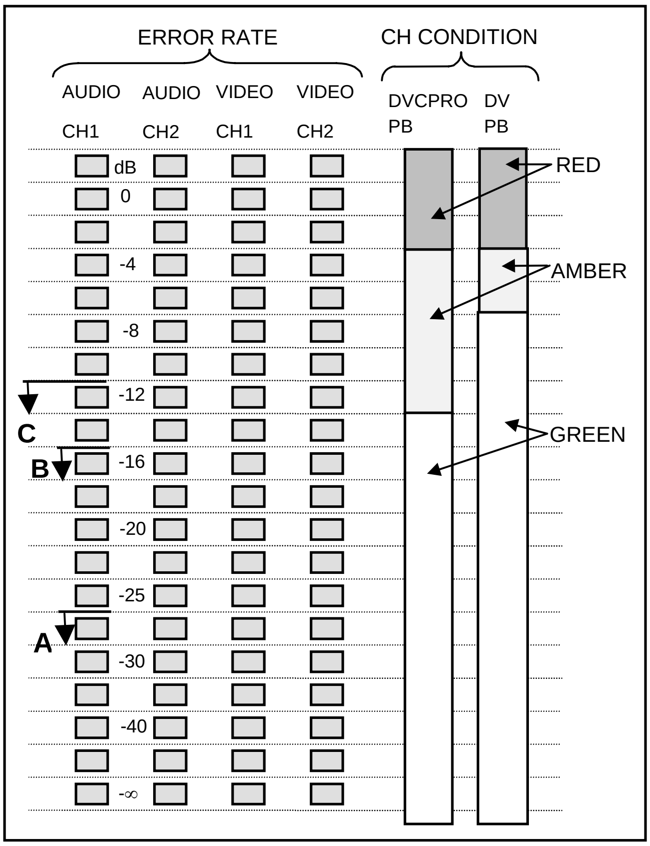
5-3-22.Final confirmation of Error Rate.

BOARD	EQ Board (H3)
SPEC.	DVCPRO (PB mode) : under the A DVCPRO (Confi mode) :under the C DV (PB mode) : under the B
TEST	Error Rate Level Meter (Front display)
MODE	PLAY, REC
TAPE	(DVCPRO Alignment Tape) NTSC: VFM3580KM, PAL: VFM3680KM (Consumer DV Alignment Tape) NTSC:VFM3110EDS, PAL:VFM3110EDS Blank Tape
M.EQ	Monitor TV

1. Set the Error Rate display mode
2. Open the EQ ADJUST menu on Service menu and set as follows.

ITEM of the MENU	DVCPRO	DV
B28: ERROR MODE	FAST	FAST
B27: PB MODE	PB H	RP H
B26: VITERBI MODE	ON	ON
B25: CONCEAL MODE	ON	ON
B24: ECC MODE	AL OFF	AL OFF

Confirm that the Error rate in specification, on DVCPRO playback, REC(confi) and DV playback mode.



5-4. REC AMP Board

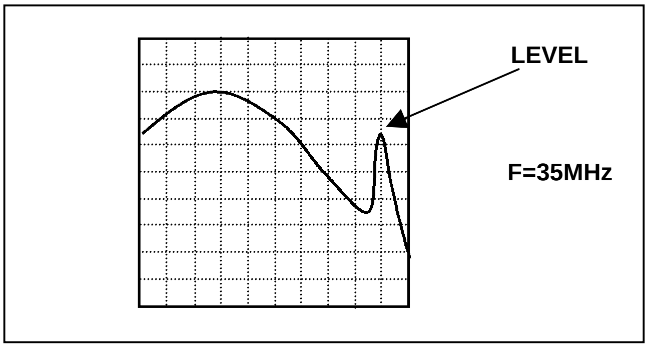
5-4-1. REC Current, Frequency Characteristic Adjustment

BOARD	RF AMP (H4)
SPEC.	-------------
TEST	TP17,TG7 (GND), TP2 (TRIG)
ADJUST	C01:REC CURR L, C03:REC CUR R C02:REC FREQ L, C04:REC FREQ R (EVR on RF ADJUST menu) VC600,VC601
INPUT	100% Colour bar
MODE	PLAY, REC / PLAY
TAPE	NTSC: VFM3580KM, PAL: VFM3680KM Blank Tape
M.EQ	Spectrum Analyzer / Monitor TV (Connect to VIDEO 3 OUT)

1. Connect the trigger of spectrum Analyzer at TP2 and connect the Spectrum Analyzer in at TP17 with 50ohm coaxial cable (Use GND at TG7).
2. Set the Error Rate display mode.
3. Open the RF ADJUST menu on Service menu and set as follows.

C20	ERROR MODE	FAST
C19	PB MODE	PB H
C18	VITERBI MODE	ON
C17	CONCEAL MODE	OFF
C16	ECC MODE	AL OFF

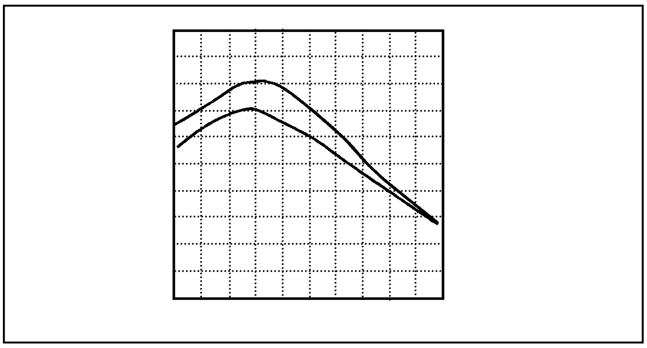
4. Playback the Alignment tape and Store the waveform on the spectrum Analyzer in TRACE-A.
5. Eject the Alignment tape and insert a Blank tape and record a colour bar 100% signal.



6. Set the TRACE-B mode on Spectrum Analyzer and Adjust VC600 and VC601 so that the peak level of 35MHz portion is minimum.
7. Adjust "C01:REC CUR L" and "C03:REC CUR R" so that the level of 5MHz portion is become –4dB±0.5dB per the waveform of TRACE-A.
8. Adjust "C02:REC FREQ L" and "C04:REC FREQ R" so that the level at 20MHz portion is become maximum.

POINT: Set the confidence playback level is lower less than level of TRACE-A and increase the gain gradually by Search Dial so that the level is maximum.
Please set the adjustment value in the first place the level is become maximum.

9. Confirm that the error rate is less than –12dB digit on the level meter.(Refer to item 5-3-22)
10. If the level of TRACE-B is not same as TRACE-A, confirm that the level of TRACE-B is within 0 to –2dB against TRASE-A (spec: 0 to –2dB).
11. Record for one minute keeping the above condition. Then playback the just recorded potion and confirm the error rate is same or better than DVCPRO playback (Refer to item 5-3-22 : equivalent level of DVCPRO Alignment tape playback).



■ **ITEM PARAMETER**

REF. LEVEL	-25dB
ATT	10dB
DIV	5dB/DIV
START FREQUENCY	0KHz
STOP FREQUENCY	40MHz
RES VW	1MHz
VBW	3KHz
SWEEP	300msec
TRIGGER	EXT (HEAD SW)

5-4-2. Rotary Erase Current Adjustment

BOARD	RF AMP (H4)
SPEC.	1.0 ± 0.12V
TEST	TP11, TP12
ADJUST	VR13, VR14
INPUT	100% Colour Bar
MODE	REC / PLAY
TAPE	Blank Tape
M.EQ	Oscilloscope

1. Insert a REC/PLAY tape auto record a 100% colour bar signal.
2. Connect a scope to TP11 with 10:1 probe and adjust VR 13 (RE A) so that the DC level is in the specification (1.0V ± 0.12V).
3. Then connect the scope to TP12 and adjust VR14 (RE B) so that the DC level is in the specification (1.0V ± 0.12V).

6. REC PB

6-1. PLL Lock DC Level Adjustment

P.C.B.	REC PB (F5)
SPEC.	0.0V ± 0.2V
TEST	TP170
ADJ.	VC170
INPUT	----------
MODE	EE
TAPE	----------
M.EQ	Oscilloscope, Monitor TV

1. Adjust VC170 so that the DC level is in specification.

Note:
Confirm that the colour bar picture has no noise by watching the monitor TV.

6-2. Audio VCO Center Freq. Adjustment

P.C.B.	REC PB (F5)
SPEC.	48kHz Mode : 48.00kHz ± 0.1kHz 44kHz Mode : 44.10kHz ± 0.1kHz 32kHz Mode : 32.00kHz ± 0.1kHz
TEST	TP460
ADJ.	VR460 (48kHz), VR461 (44kHz), VR462 (32kHz)
INPUT	----------
MODE	EE
TAPE	----------
M.EQ	Oscilloscope, Frequency Counter, Monitor TV

1. Open the “E00:AUDIO ADJUST” menu on the Service Menu.
2. Select the item “E06:A VCO ADJ” and it setting follow the adjustment frequency as indicated as below procedure..

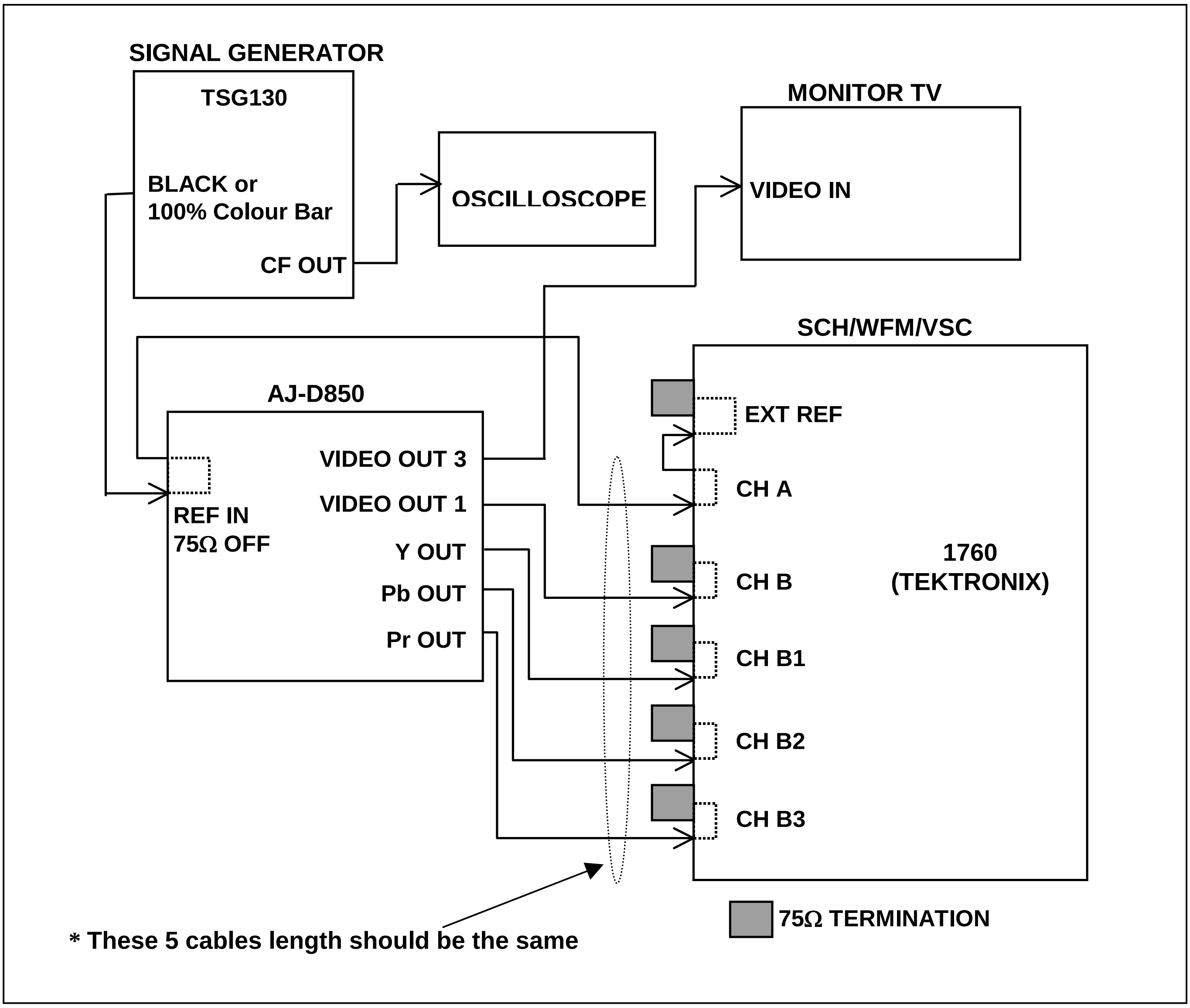
E06	: A VCO ADJ	48kHz
E06	: A VCO ADJ	44kHz
E06	: A VCO ADJ	32kHz

3. Set the item “ E06:A VCO ADJ” to 48kHz and adjust VR460 so that the frequency is 48.00kHz ± 0.1kHz.
4. Set the item “ E06:A VCO ADJ” to 44kHz and adjust VR461 so that the frequency is 44.10kHz ± 0.1kHz.
5. Set the item “ E06:A VCO ADJ” to 32kHz and adjust VR462 so that the frequency is 32.00kHz ± 0.1kHz.
6. Finally, close the Service Menu.

7. Video Out P. C. Board (F4) [FOR NTSC ONLY]

Please warm up the VTR about 10 minute before adjustment.

CONNECTION



SIGNAL GENERATOR
TSG130
BLACK or
100% Colour Bar
CF OUT
OSCILLOSCOPE
MONITOR TV
VIDEO IN
SCH/WFM/VSC
AJ-D850
EXT REF
VIDEO OUT 3
VIDEO OUT 1
REF IN
75Ω OFF
CH A
Y OUT
Pb OUT
Pr OUT
CH B
1760
(TEKTRONIX)
CH B1
CH B2
CH B3
75Ω TERMINATION
* These 5 cables length should be the same

7-1. REF PLL Center Adjustment

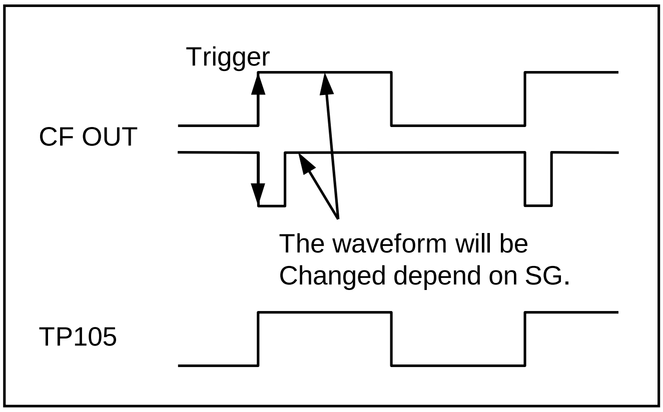
P.C.B.	V_OUT (F4)
SPEC.	0V ± 0.1VDC
TEST	TP70 (D-1)
ADJ.	VC70 (D-1)
INPUT	EXT REF IN: Composite 75% Color Bar
MODE	EE
TAPE	-----------
M.EQ	Oscilloscope

1. Adjust VC70 so that the voltage is 0V ± 0.1VDC.

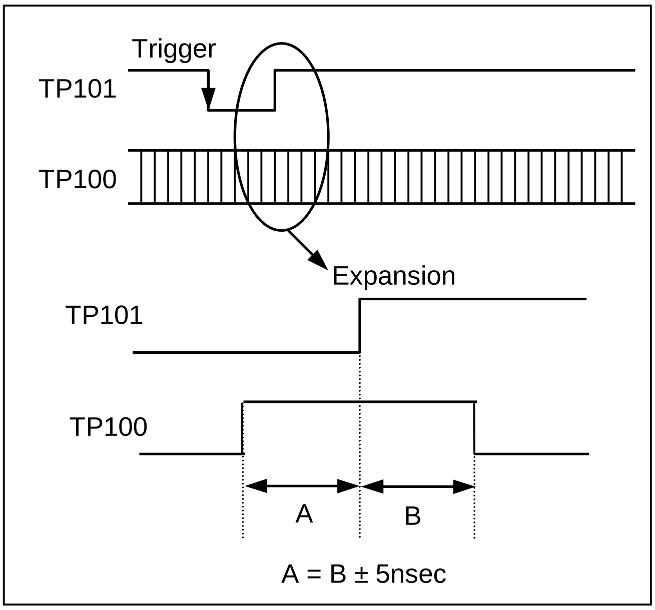
7-2. REF CF Detection Adjustment

P.C.B.	V_OUT (F4)
SPEC.	See Figure, A = B ± 5%
TEST	TP105 (E-4), CF Out of Signal SG TP100 (E-1), TP101 (E-1)
ADJ.	VR100 (C-1)
INPUT	EXT REF IN: Composite 75% Color Bar
MODE	EE
TAPE	-----------
M.EQ	Oscilloscope

1. Connect the oscilloscope CH1 to the CF output of composite signal generator and CH2 to TP105.
2. Adjust VR100 so that the phase is synchronized between CF pulses and TP105 as shown in figure.


Trigger
CF OUT
The waveform will be
Changed depend on SG.
TP105

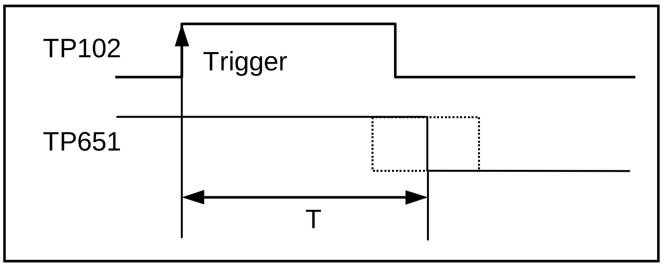
3. Connect the oscilloscope CH1 to TP101 and CH2 to TP100.
4. Expand (delay) the rising edge of TP100.
5. Slowly and slightly rotate VR100 so that the rising edge of TP101 is positioned at the center of cross point between A and B of waveform at TP100.


Trigger
TP101
TP100
Expansion
TP101
TP100
A
B
A = B ± 5nsec

7-3. Ref. H Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 5.3 ± 0.1us
TEST	TP102 (E-1), TP651 (F-2)
ADJ.	VR101 (C-1)
INPUT	EXT REF IN: Composite 75% Color Bar
MODE	EE
TAPE	--------------
M.EQ	Oscilloscope

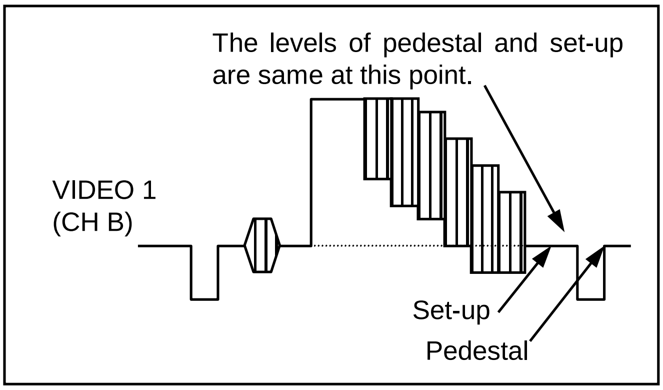
1. Connect the oscilloscope CH1 to TP102 and CH2 to TP651.
2. Adjust VR101 so that the timing of the pulses at TP651 and TP102 is as shown in below.


TP102
Trigger
TP651
T

7-4. Composite Set-up Adjustment

P.C.B.	V_OUT (F4)
SPEC.	Set-up Level = Pedestal Level ± 1RE
TEST	VIDEO OUT 1
ADJ.	VR902 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

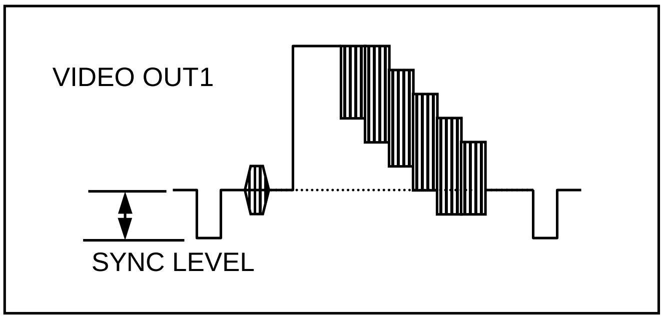
1. Open the VIDEO ADJUST menu on Service Menu and set item “D08: V SETUP” to ON.
2. Set the item “613:V IN SETUP” and “614:V OUT SETUP” to “THRU” on SET UP menu.
3. Adjust VR902 so that the set-up level is the same level as the pedestal level.


The levels of pedestal and set-up are same at this point.
VIDEO 1
(CH B)
Set-up
Pedestal

7-5. Sync Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	40IRE ± 1%
TEST	VIDEO OUT 1
ADJ.	VR950 (F-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

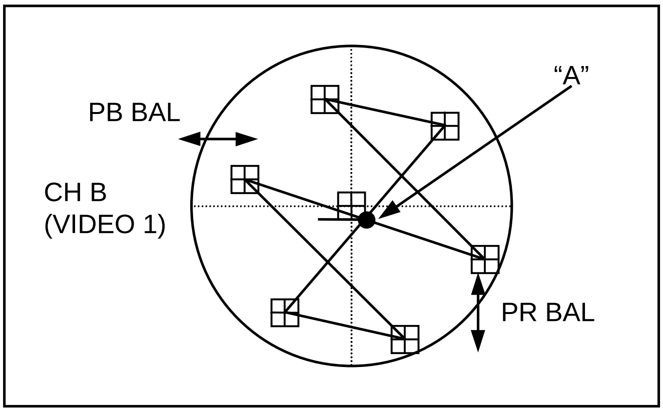
1. Adjust VR950 so that the Sync Level is 40IRE ± 1%.


VIDEO OUT1
SYNC LEVEL

7-6. Carrier Balance Adjustment

P.C.B.	V_OUT (F4)
SPEC.	Cross point “A” at the center of scope.
TEST	REF IN (CH A), VIDEO OUT 1(CH B)
ADJ.	VR806 (H-1), VR807 (H-1)
INPUT	EXT REF IN
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Vector Scope

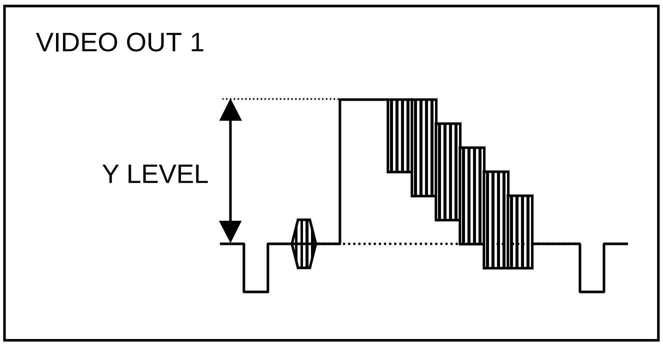
1. Adjust VR806 (PB BAL) and VR807 (PR BAL) so that the cross point “A” is positioned at the center of the vector scope.


“A”
PB BAL
CH B
(VIDEO 1)
PR BAL

7-7. Composite Y Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	100IRE ± 1%
TEST	VIDEO OUT 1
ADJ.	VR900 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

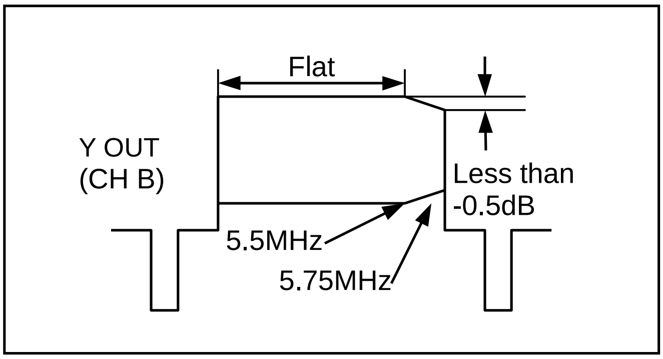
1. Adjust VR900 so that the Y level is 100IRE ± 1%.


VIDEO OUT 1
Y LEVEL

7-8. Composite Y Frequency Response Adjustment

P.C.B.	V_OUT (F4)
SPEC.	5.5MHz = Less than –0.5dB
TEST	Y OUT
ADJ.	VR901 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (H-Sweep portion)
M.EQ	Waveform Monitor

1. Adjust VR901 so that the frequency response becomes flat.
   a) The level of 5.5MHz portion is less than –0.5dB.
   b) The middle frequency is flat.

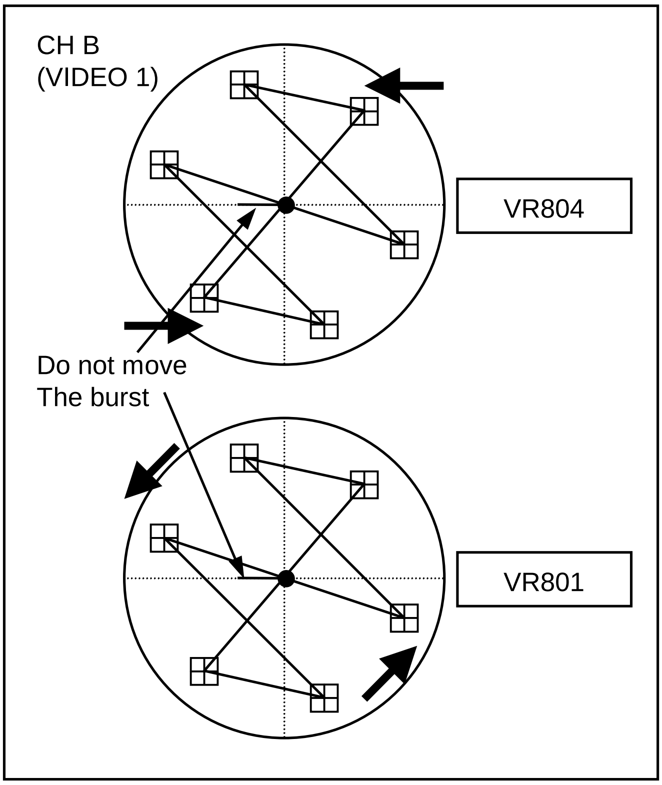

Flat
Y OUT
(CH B)
Less than
-0.5dB
5.5MHz
5.75MHz

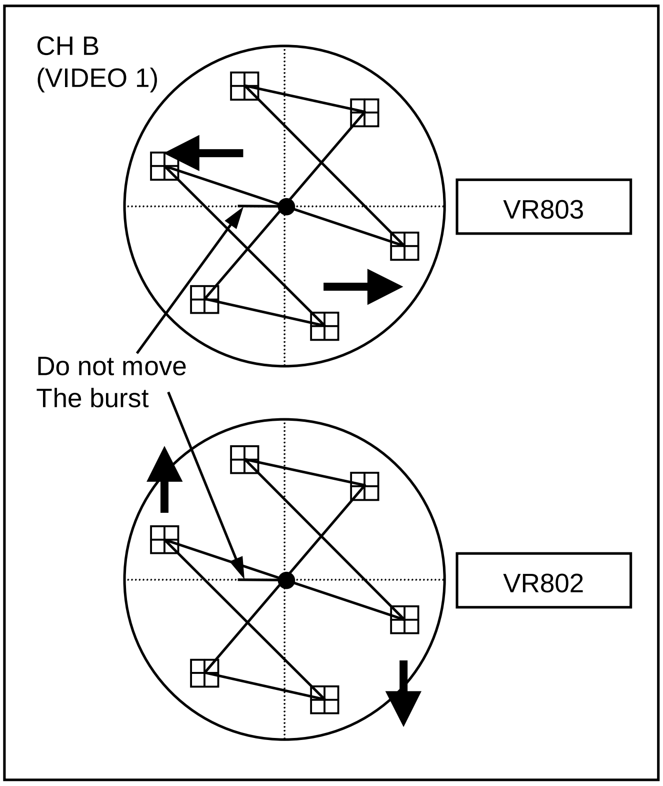
7-9. Vector Adjustment

P.C.B.	V_OUT (F4)
SPEC.	All vectors are in the Inner Boxes
TEST	VIDEO OUT 1
ADJ.	VR801 (H-1), VR802 (I-1) VR803 (H-1), VR804 (I-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Vector Scope

1. Set the burst position on the Vector Scope at correct position.
2. Adjust the following VR's so that the color bar's each vector points are in the square mark on the vector scope.

VR804 : Quad Phase
VR801 : Hue Phase
VR803 : Encode PB Level
VR802 : Encode PR Level

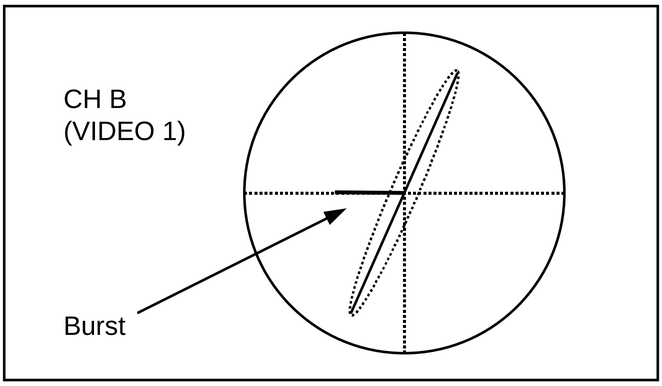

CH B
(VIDEO 1)
VR804
Do not move
The burst
VR801


CH B
(VIDEO 1)
VR803
Do not move
The burst
VR802

7-10. Composite Pb/Pr Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec
TEST	VIDEO OUT 1
ADJ.	VR703 (H-3)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (Bowtie portion)
M.EQ	Vector Scope

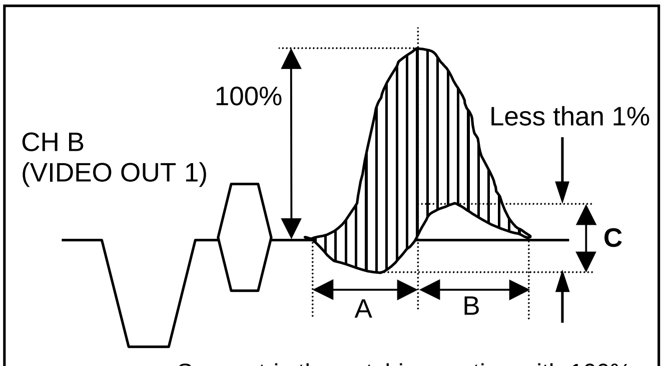
1. Adjust VR703 so that the signal on the vector scope becomes 1 straight lines (X) as shown in figure.



7-11. Composite Y/C Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec (C = less than 1%)
TEST	VIDEO OUT 1
ADJ.	VR903 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (Pulse Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR903 so that the portion A and B are become symmetric left and right and level of portion C less than 1% against level of waveform 100% as shown in figure.
2. When performing this adjustment, the level of waveform may be changed. Therefore, level of waveform is adjusted by Chroma VR on the front panel during this adjustment.
3. After finish this adjustment set the Chroma VR to preset position.
4. After completion of this adjustment, “6-12. Sub-Carrier Phase Adjustment” should be performed.

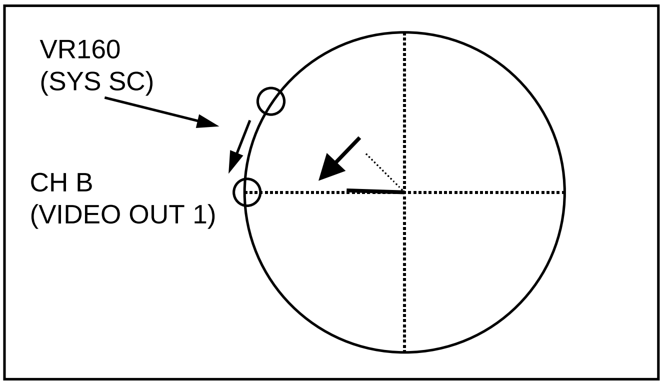


Symmetric the notching portion with 100% and measure with X10

7-12. Sub-Carrier Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 1degree
TEST	VIDEO OUT 1, REF IN
ADJ.	VR160 (C-1)
INPUT	REF IN: Composite 75% Color Bar
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	SCH Meter

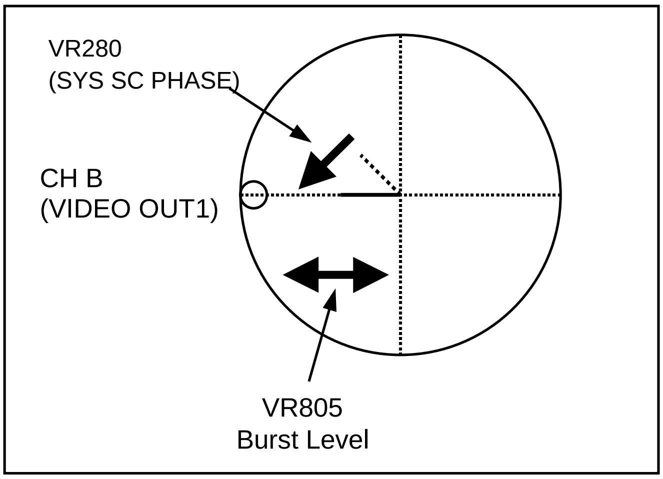
1. Adjust VR160 so that the SCH of VIDEO OUT is same as EXT-REF-IN, then SCH phase should be become 0 ± 1 degree.

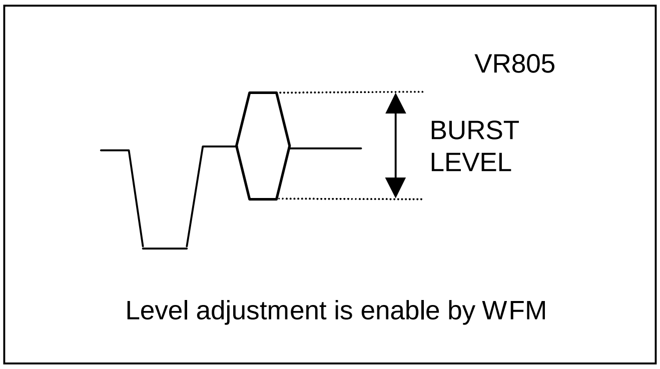

VR160
(SYS SC)
CH B
(VIDEO OUT 1)

7-13. Burst Adjustment

P.C.B.	V_OUT (F4)
SPEC.	PHASE: 0 ± 1degree LEVEL: 40 ± 0.4IRE
TEST	VIDEO OUT 1
ADJ.	VR280 (C-1), VR805 (I-1)
INPUT	REF IN: Composite 75% Color Bar
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	SCH Meter

1. Adjust VR280 while changing the channels A and B of the SCH meter alternately so that the SCH is 0 degree.
2. Adjust VR805 while changing the channels A and B of the SCH meter alternately so that the burst level and burst phase are become same between VIDEO 1 OUT(CHB) and REF(CHA),then burst level is should be become 40 ± 0.4IRE.


VR280
(SYS SC PHASE)
CH B
(VIDEO OUT1)
VR805
Burst Level

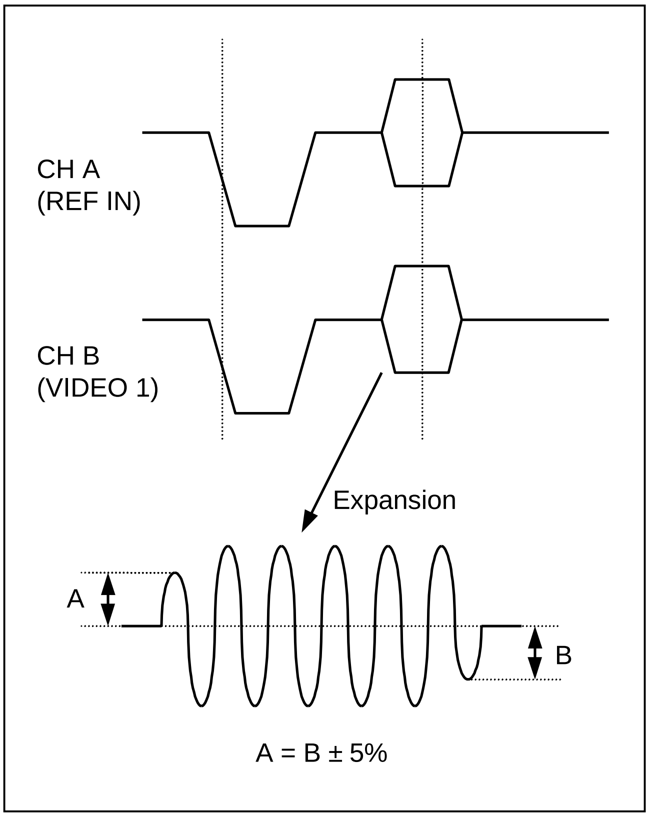

VR805
BURST
LEVEL

Level adjustment is enable by WFM

7-14. Burst Position Adjustment

P.C.B.	V_OUT (F4)
SPEC.	A = B ± 5%
TEST	VIDEO OUT 1, REF IN
ADJ.	VR201 (A-1)
INPUT	REF IN: Composite 75% Color Bar
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR201 while changing the channels A and B of the vector scope alternately so that the center of the burst of the reference and VIDEO OUT 1 are phase synchronized and level difference between A and B portion in specification.

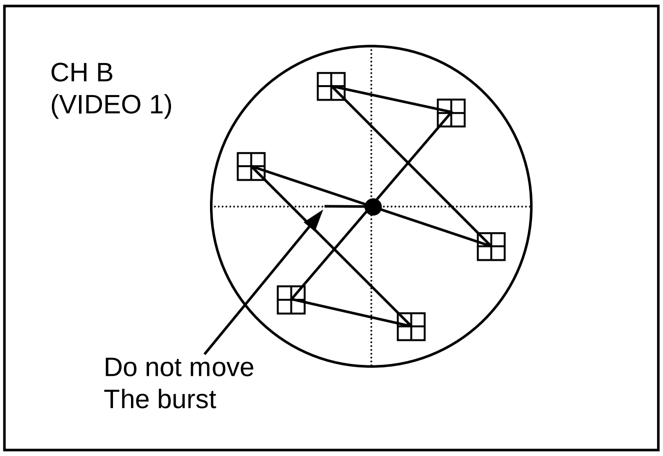


7-15. Confirmation of Vector

P.C.B.	V_OUT (F4)
SPEC.	All vectors are in the Inner Boxes
TEST	VIDEO OUT 1
ADJ.	VR801 (H-1), VR803 (H-1) VR802 (I-1), VR800 (H-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Vector Scope

1. Set the burst position on the Vector Scope at correct position.
2. Confirm that the color bar's each vector points are in the square mark on the vector scope.
3. If out of specification, adjust the following VR's so that the color bar's each vector points are in the square mark on the vector scope.(Refer to item 7-9. Vector Adjustment).

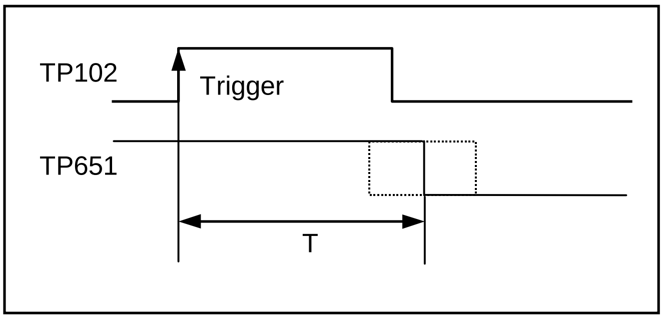
VR804	:	Quad Phase
VR801	:	Hue Phase
VR803	:	Encode PB Level
VR802	:	Encode PR Level



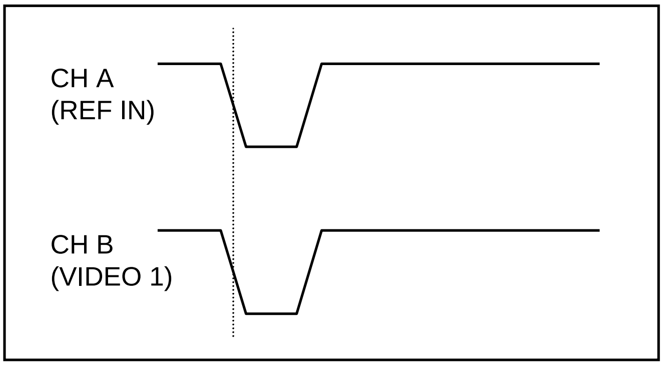
7-16. Component Ref. H & Sub-Carrier Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 5.3 ± 0.1usec 0 ± 10nsec
TEST	TP102, TP651 VIDEO OUT 1 , EXT REF IN
ADJ.	VR102 (C-1)
INPUT	REF IN : 75% Color Bar (without burst: Component Y)
MODE	EE
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Oscilloscope, Waveform Monitor

1. Connect the oscilloscope CH1 to TP102 and CH2 to TP651.
2. Adjust VR102 so that the timing of the phase at TP102 and TP651 are as shown in below.



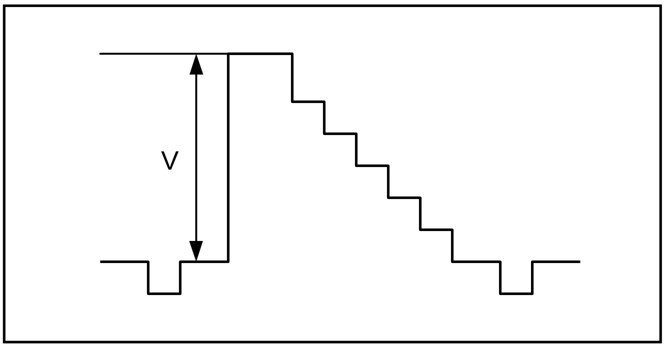
3. Playback the color bar portion of Alignment tape.
4. Adjust VR102 so that the phase synchronized within 0 ± 10 nsec between REF IN (CHA) and Video 1 Out (CHB) as shown in figure.



7-17. Component Y Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	V = 700mV ± 7mV
TEST	COMPONENT Y OUT
ADJ.	VR700 (I-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

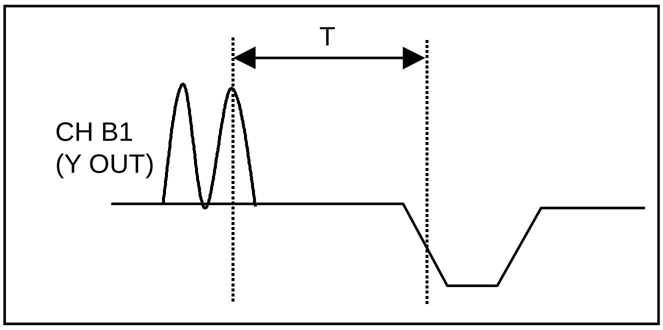
1. Set the SW950 to M II side on V OUT P.C.Board..
2. Adjust VR700 so that the V level is 700mV ± 7mV.



7-18. Video Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 1.26 ± 0.02usec
TEST	Y OUT
ADJ.	VR260 (A-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (Area Marker portion)
M.EQ	Waveform Monitor

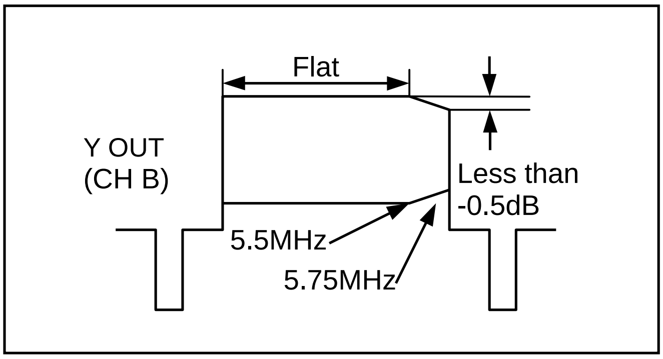
1. Open the Video Adjust menu on Service menu and set item “D01:VIDEO BLANK” to OFF position.
2. Adjust VR260 so that the timing T is within specification.
3. After finish this adjustment, set to ON position of item “D01:VIDEO BLANK”.



7-19. Component Y Frequency Response Adjustment

P.C.B.	V_OUT (F4)
SPEC.	5.5MHz = Less than –0.5dB
TEST	COMPONENT Y OUT
ADJ.	VR701 (I-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (H Sweep portion)
M.EQ	Waveform Monitor

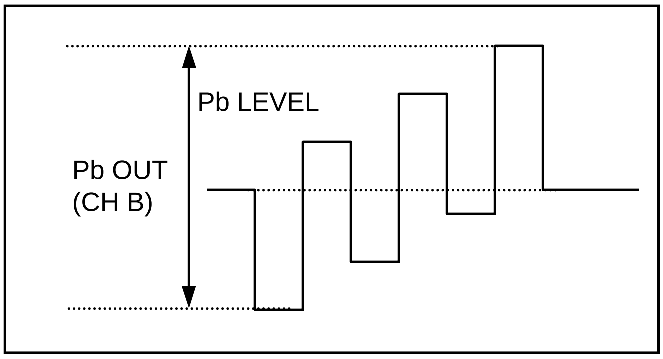
1. Adjust VR701 so that the frequency response becomes flat.



7-20. Component Pb Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	525mV ± 5mV
TEST	COMPONENT PB OUT
ADJ.	VR706 (J-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

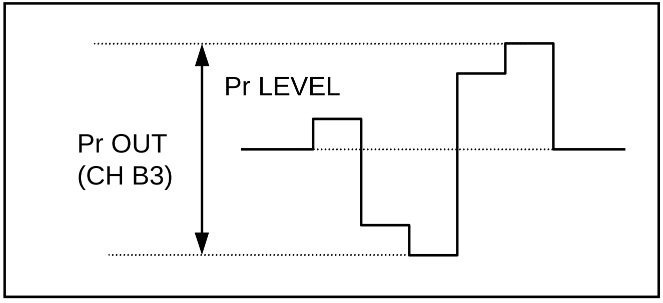
1. Set the SW950 to M II side on V OUT P.C.Board..
2. Adjust VR706 so that the Pb level of component out is within specification.



7-21. Component Pr Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	525mV ± 5mV
TEST	COMPONENT Pr OUT
ADJ.	VR704 (H-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

1. Set the SW950 to M II side on V OUT P.C.Board..
2. Adjust VR704 so that the Pr level of component out is within specification.

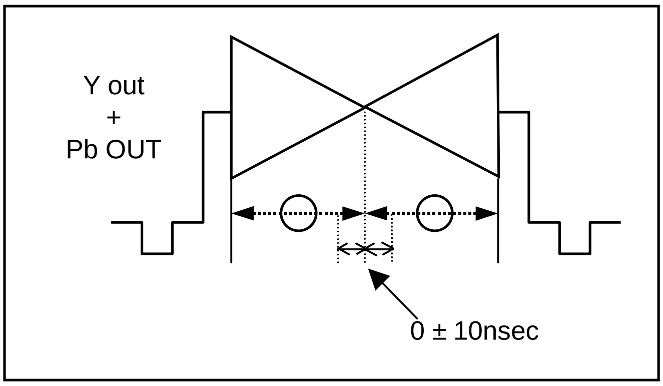


7-22. Component Y/Pb Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec
TEST	COMPONENT Y OUT, PB OUT
ADJ.	VR705 (J-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (Bowtie portion)
M.EQ	Waveform Monitor

1. Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).
2. Adjust VR705 so that the cross point of the envelope is at the center.

Note: Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have “ADD” and “INVERT” switch, please use those switch for make below waveform.

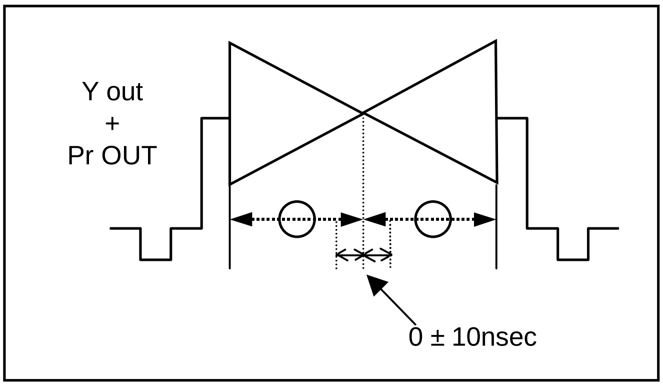


7-23. Component Y/Pr Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec
TEST	COMPONENT Y OUT, Pr OUT
ADJ.	VR702 (H-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (Bowtie portion)
M.EQ	Waveform Monitor

1. Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).
2. Adjust VR702 so that the cross point of the envelope is at the center.

Note: Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have “ADD” and “INVERT” switch, please use those switch for make below waveform.

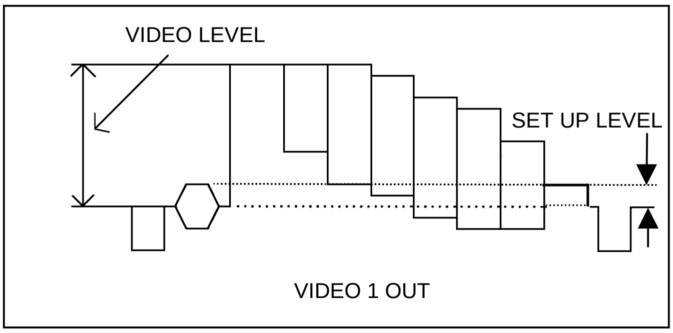


7-24. Composite Set up Adjustment (Set up ADD mode)

P.C.B.	V_OUT (F4)
SPEC.	Set up level = 7.5 ± 0.5IRE
TEST	VIDEO 1 OUT
ADJ.	VR905 (G-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

1. Set the item “614: VOUT SET UP” to “ADD” on Set-up menu.
2. Adjust VR905 so that the Set-up level is 7.5 ± 0.5IRE.

NOTE: Signal have carrier leak and noise, therefore set Y-filter mode on WFM monitor.

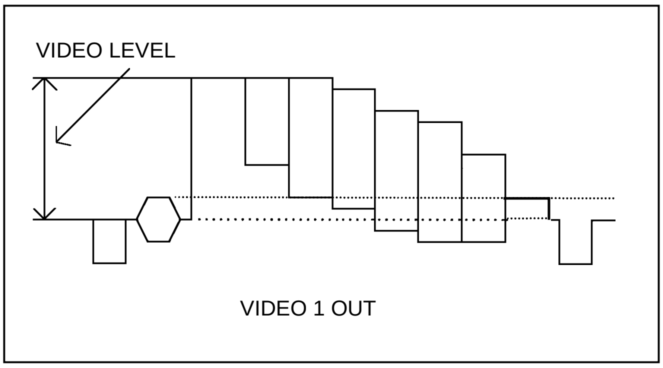


7-25. Composite Video Level Adj. (Set up ADD mode)

P.C.B.	V_OUT (F4)
SPEC.	Video level = 100 ± 1 IRE
TEST	VIDEO 1 OUT
ADJ.	VR904 (G-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Waveform Monitor

1. Set the item “614: VOUT SET UP” to “ADD” on Set-up menu.
2. Adjust VR904 so that the Video level is 100 ± 1 IRE.

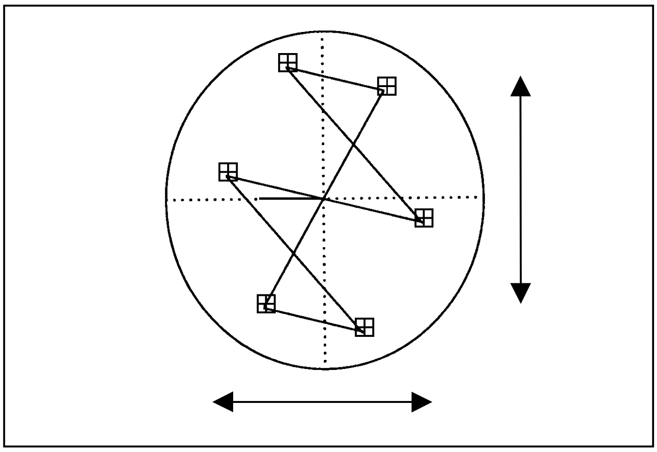
NOTE: Signal have carrier leak and noise, therefore set Y-filter mode on WFM monitor.



7-26. Vector Adjustment (Set up ADD mode)

P.C.B.	V_OUT (F4)
SPEC.	All vectors are in the Inner Boxes
TEST	VIDEO 1 OUT
ADJ.	VR809 (I-1),VR810 (I-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3580KM (75% Color Bar portion)
M.EQ	Vector Scope

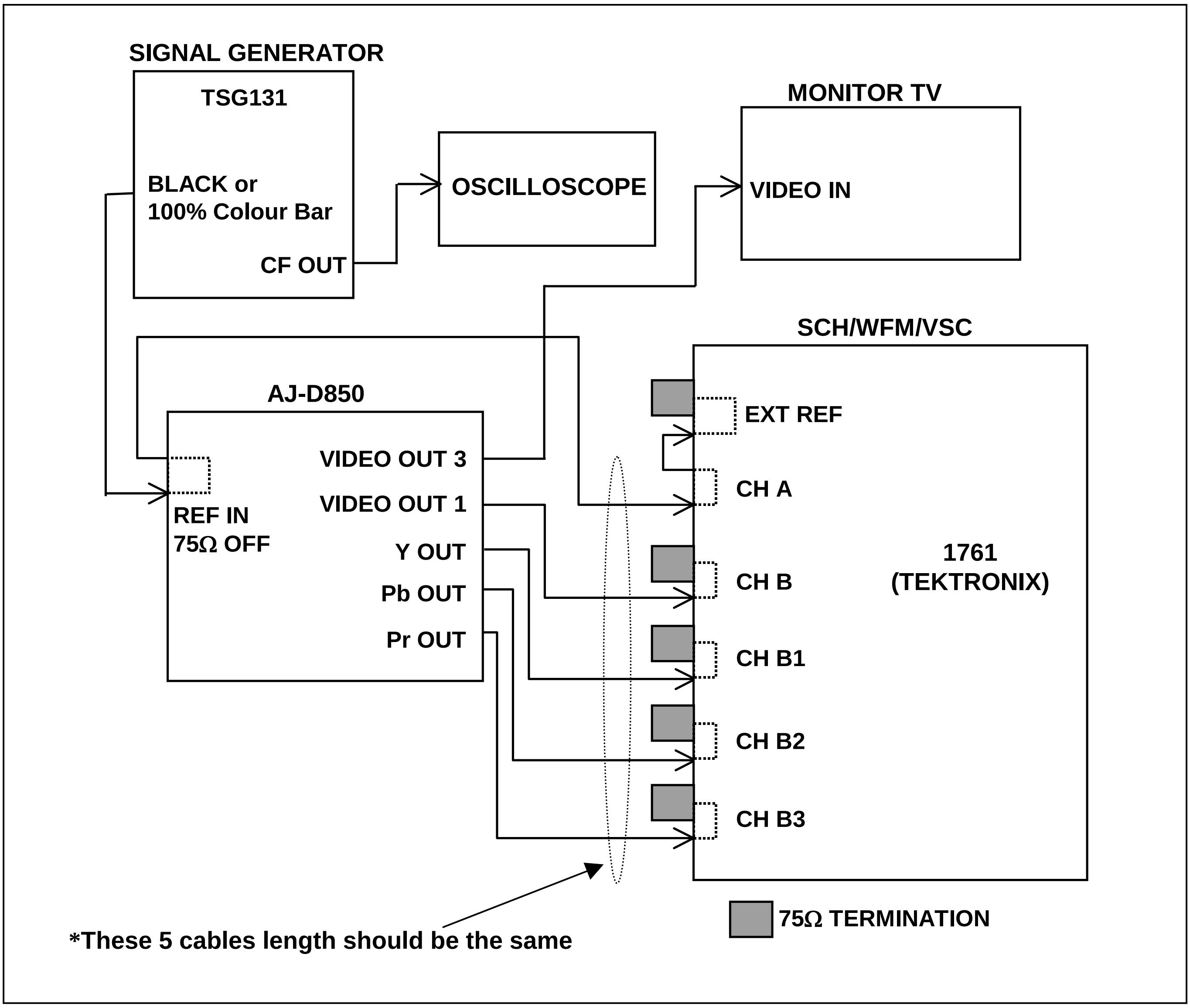
1. Set the item “614: VOUT SET UP” to “ADD” on Set-up menu.
2. Adjust VR809(PR) and VR810(PB) so that the each vector points are in the square mark on the vector scope.



7. Video Out P. C. Board (F4) [FOR PAL ONLY]

Please warm up the VTR about 10 minute before adjustment.

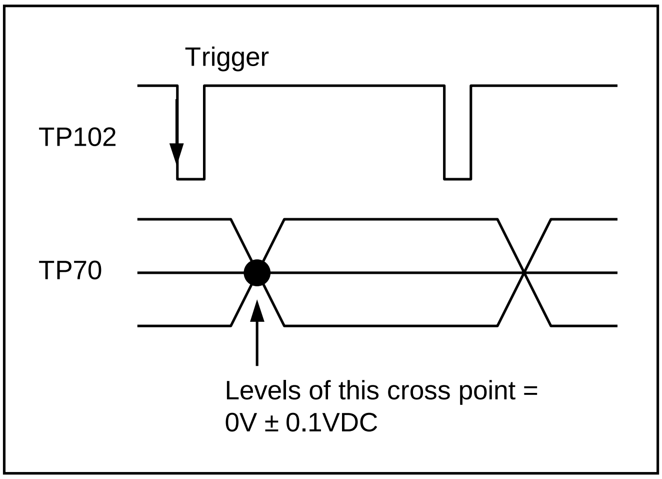
CONNECTION


SIGNAL GENERATOR
TSG131
BLACK or
100% Colour Bar
CF OUT
OSCILLOSCOPE
MONITOR TV
VIDEO IN
SCH/WFM/VSC
AJ-D850
VIDEO OUT 3
VIDEO OUT 1
Y OUT
Pb OUT
Pr OUT
REF IN
75Ω OFF
EXT REF
CH A
CH B
CH B1
CH B2
CH B3
1761
(TEKTRONIX)
75Ω TERMINATION
*These 5 cables length should be the same

7-1. REF PLL Center Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0V ± 0.1VDC
TEST	TP70 (D-1), TP102
ADJ.	VC70 (D-1)
INPUT	EXT REF IN: Composite 100% Colour Bar
MODE	EE
TAPE	-----------
M.EQ	Oscilloscope

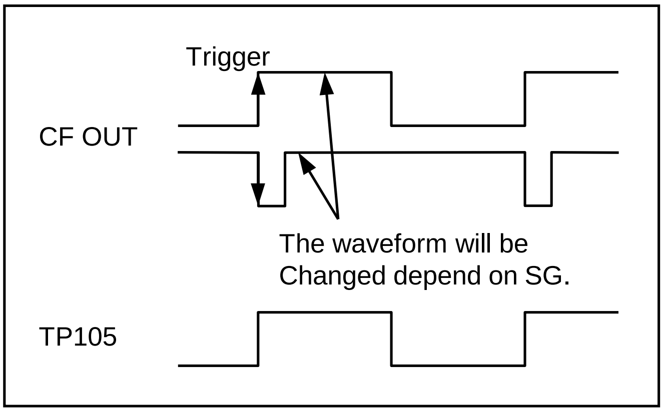
1. Adjust VC70 so that the voltage is 0V ± 0.1VDC.


Trigger
TP102
TP70
Levels of this cross point =
0V ± 0.1VDC

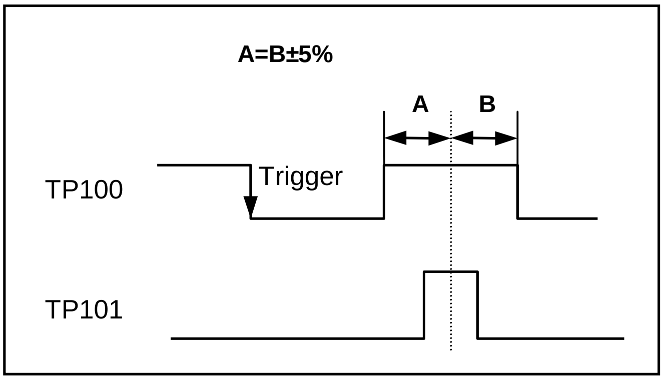
7-2. REF CF Detection Adjustment

P.C.B.	V_OUT (F4)
SPEC.	See Figure, A = B ± 5%
TEST	TP105 (E-4), CF Out of Signal SG TP100 (E-1), TP101 (E-1)
ADJ.	VC100 (C-1)
INPUT	EXT REF IN: Composite 100% Colour Bar
MODE	EE
TAPE	-----------
M.EQ	Oscilloscope

1. Connect the oscilloscope CH1 to the CF output of composite signal generator and CH2 to TP105.
2. Adjust VR100 so that the phase is synchronized between CF pulses and TP105 as shown in figure.


Trigger
CF OUT
The waveform will be
Changed depend on SG.
TP105

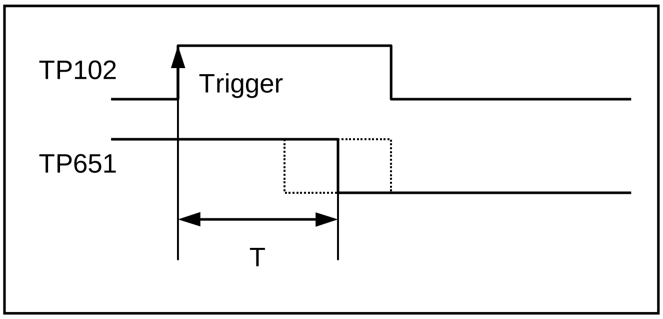
3. Connect the oscilloscope CH1 to TP101 and CH2 to TP100.
4. Expand (delay) the rising edge of TP100.
5. Slowly and slightly rotate VR100 so that the high period of TP100 is positioned at the center of the stable waveform at TP101.


A=B±5%
A
B
TP100
Trigger
TP101

7-3. Ref. H Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 3.3 ± 0.1us
TEST	TP102 (E-1), TP651 (F-2)
ADJ.	VR101 (C-1)
INPUT	EXT REF IN: Composite 100% Colour Bar
MODE	EE
TAPE	--------------
M.EQ	Oscilloscope

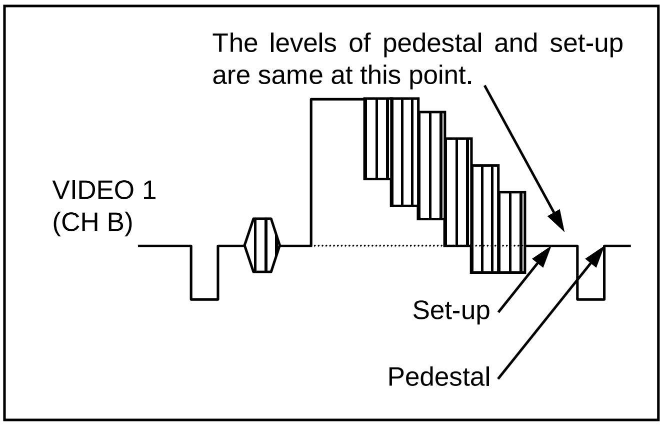
1. Connect the oscilloscope CH1 to TP102 and CH2 to TP651.
2. Adjust VR101 so that the timing of the pulses at TP651 and TP102 is as shown in below.


TP102
Trigger
TP651
T

7-4. Composite Set-up Adjustment

P.C.B.	V_OUT (F4)
SPEC.	Set-up Level = Pedestal Level ± 5mV
TEST	VIDEO 1
ADJ.	VR902 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

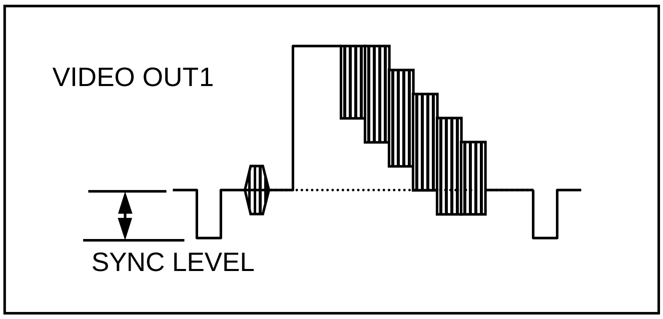
1. Adjust VR902 so that the set-up level is the same level as the pedestal level.


The levels of pedestal and set-up are same at this point.
VIDEO 1
(CH B)
Set-up
Pedestal

7-5. Sync Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	300mV ± 3mV
TEST	VIDEO OUT 1
ADJ.	VR950 (F-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

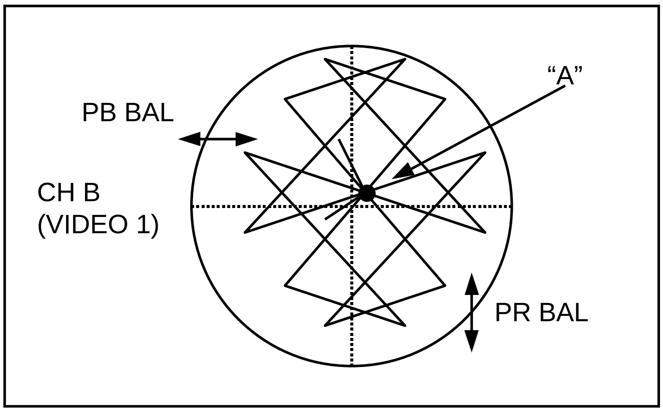
1. Adjust VR950 so that the Sync Level is 300mV ± 3mV.


VIDEO OUT1
SYNC LEVEL

7-6. Carrier Balance Adjustment

P.C.B.	V_OUT (F4)
SPEC.	Cross point “A” at the center of scope.
TEST	REF IN (CH A), VIDEO OUT 1(CH B)
ADJ.	VR806 (H-1), VR807 (H-1)
INPUT	EXT REF IN
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Vector Scope

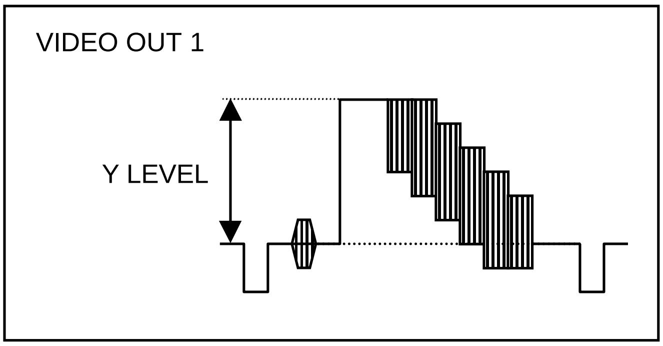
1. Set the vector scope in the without set-up mode.
2. Adjust VR806 (PB BAL) and VR807 (PR BAL) so that the cross point “A” is positioned at the center of the vector scope.


PB BAL
“A”
CH B
(VIDEO 1)
PR BAL

7-7. Composite Y Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	700mV ± 7mV
TEST	VIDEO 1
ADJ.	VR900 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

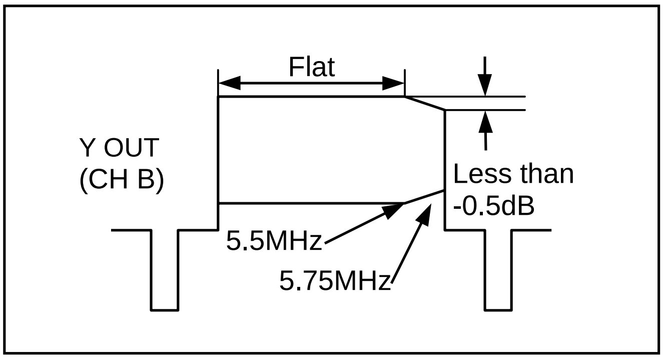
1. Adjust VR900 so that the Y level is 700mV ± 7mV.


VIDEO OUT 1
Y LEVEL

7-8. Composite Y Frequency Response Adjustment

P.C.B.	V_OUT (F4)
SPEC.	5.5MHz = Less than –0.5dB
TEST	Y OUT
ADJ.	VR901 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (H-Sweep portion)
M.EQ	Waveform Monitor

1. Adjust VR901 so that the frequency response becomes flat.
   a) The level of 5.5MHz portion is less than –0.5dB.
   b) The middle frequency is flat.

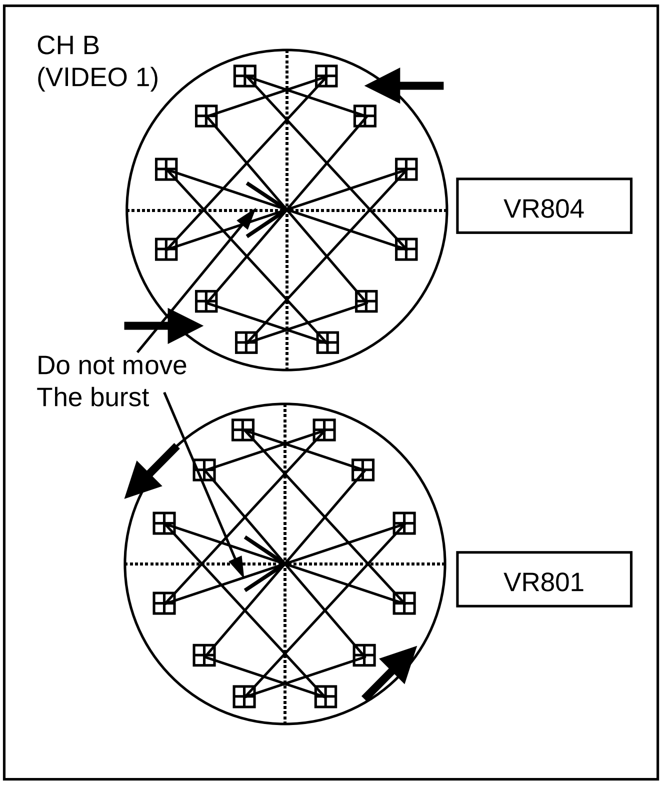

Flat
Y OUT
(CH B)
Less than
-0.5dB
5.5MHz
5.75MHz

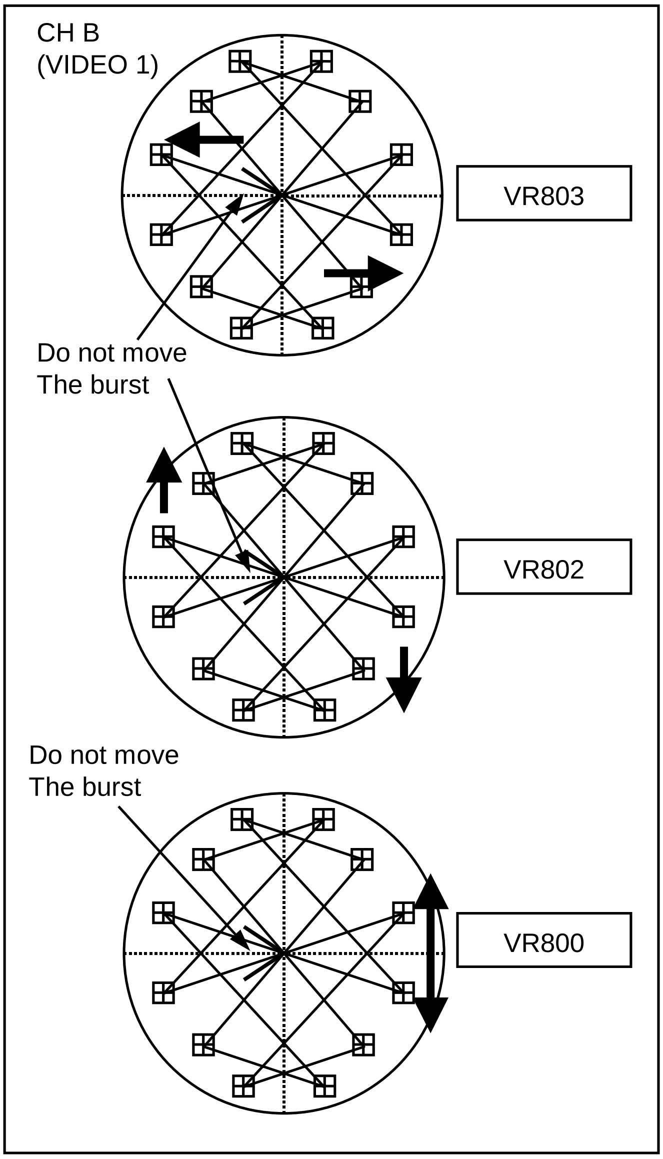
7-9. Vector Adjustment

P.C.B.	V_OUT (F4)
SPEC.	All vectors are in the Inner Boxes
TEST	VIDEO OUT 1
ADJ.	VR804 (I-1), VR801 (H-1), VR803 (H-1) VR802 (I-1), VR800 (H-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Vector Scope

1. Set the burst position on the Vector Scope at correct position.
2. Adjust the following VR's so that the colour bar's each vector points are in the square mark on the vector scope.

VR804 : Quad Phase
VR801 : Hue Phase
VR803 : Encode PB Level
VR802 : Encode PR Level
VR800 : PAL Phase

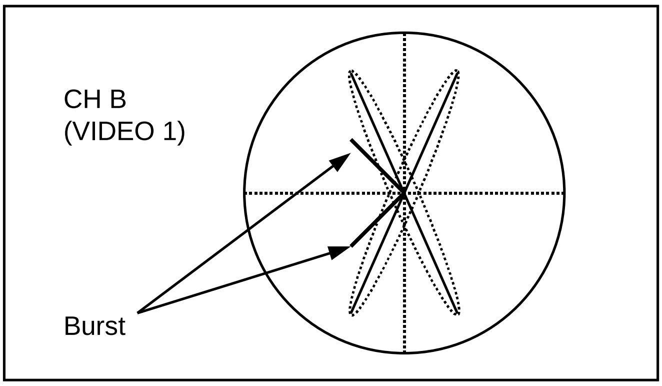

CH B
(VIDEO 1)
VR804
Do not move
The burst
VR801


CH B
(VIDEO 1)
VR803
Do not move
The burst
VR802
Do not move
The burst
VR800

7-10. Composite Pb/Pr Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec
TEST	VIDEO OUT 1
ADJ.	VR703 (H-3)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (Bowtie portion)
M.EQ	Vector Scope

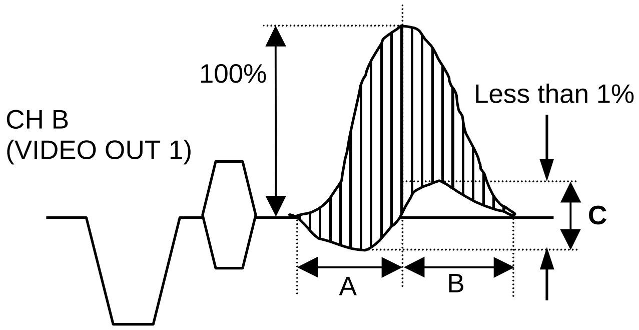
1. Adjust VR703 so that the signal on the vector scope becomes 2 straight lines (X) as shown in figure.



7-11. Composite Y/C Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec (C = less than 1%)
TEST	VIDEO OUT 1
ADJ.	VR903 (G-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (Pulse Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR903 so that the portion A and B are become symmetric left and right and level of portion C less than 1% against level of waveform 100% as shown in figure.
2. When performing this adjustment, the level of waveform may be changed. Therefore, level of waveform is adjusted by Chroma VR on the front panel during this adjustment.
3. After finish this adjustment set the Chroma VR to preset position.
4. After completion of this adjustment, “6-12. Sub-Carrier Phase Adjustment” should be performed.

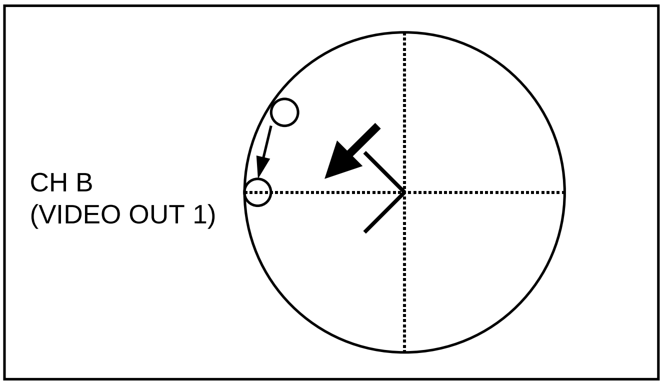


Symmetric the notching portion with 100% and measure with X10

7-12. Sub-Carrier Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 1degree
TEST	VIDEO OUT 1, REF IN
ADJ.	VR160 (C-1)
INPUT	REF IN: Composite 100% Colour Bar
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	SCH Meter

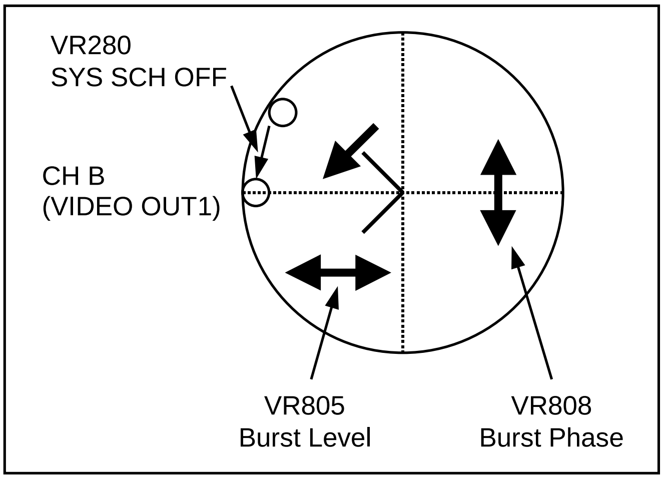
1. Adjust VR160 so that the SCH of VIDEO OUT is same as EXT-REF-IN.


CH B
(VIDEO OUT 1)

7-13. Burst Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 1degree
TEST	VIDEO OUT 1
ADJ.	VR280 (C-1), VR805 (I-1), VR808 (I-1)
INPUT	REF IN: Composite 100% Colour Ba
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	SCH Meter

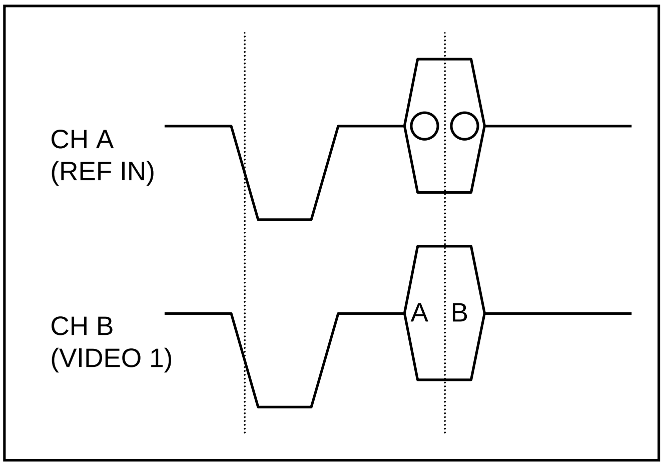
1. Adjust VR280 while changing the channels A and B of the SCH meter alternately so that the SCH is 0 degree.
2. Adjust VR805 and VR808 while changing the channels A and B of the SCH meter alternately so that the burst level and burst phase are become same between VIDEO 1 OUT(CHB) and REF(CHA).


VR280
SYS SCH OFF
CH B
(VIDEO OUT1)
VR805
Burst Level
VR808
Burst Phase

7-14. Burst Position Adjustment

P.C.B.	V_OUT (F4)
SPEC.	A = B ± 5%
TEST	VIDEO OUT 1, REF IN
ADJ.	VR201 (A-1)
INPUT	REF IN: Composite 100% Colour Bar
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR201 while changing the channels A and B of the vector scope alternately so that the center of the burst of the reference and VIDEO OUT 1 are phase syncronized.

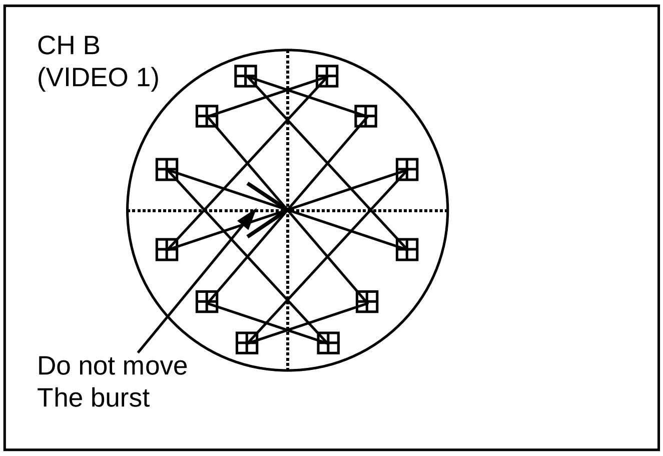


7-15. Confirmation of Vector

P.C.B.	V_OUT (F4)
SPEC.	All vectors are in the Inner Boxes
TEST	VIDEO OUT 1
ADJ.	VR804 (I-1), VR801 (H-1), VR803 (H-1) VR802 (I-1), VR800 (H-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Vector Scope

1. Set the burst position on the Vector Scope at correct position.
2. Confirm that the colour bar's each vector points are in the square mark on the vector scope.
3. If out of specification, adjust the following VR's so that the colour bar's each vector points are in the square mark on the vector scope.(Refer to item 6-9. Vector Adjustment).

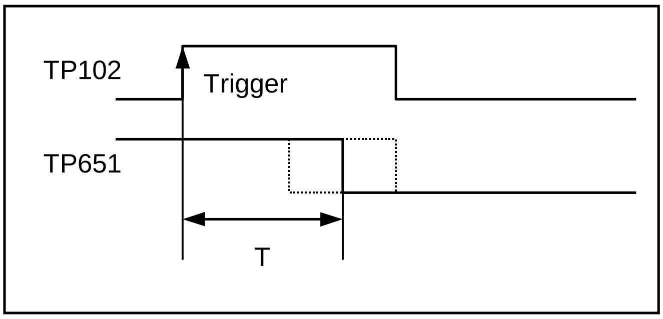
VR804	:	Quad Phase
VR801	:	Hue Phase
VR803	:	Encode PB Level
VR802	:	Encode PR Level
VR800	:	PAL Phase



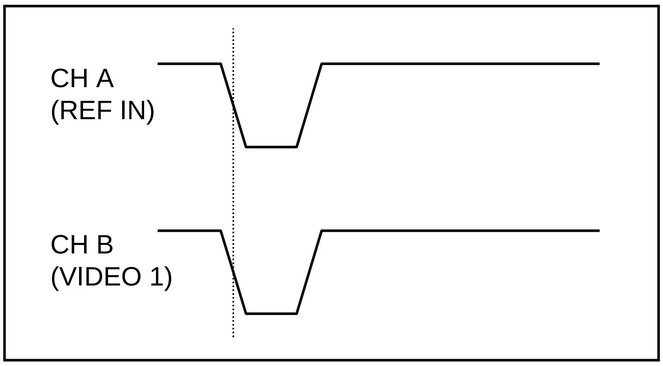
7-16. Component Ref. H & Sub-Carrier Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 3.3 ± 0.1usec 0 ± 10nsec
TEST	TP102, TP651 VIDEO OUT 1, EXT REF IN
ADJ.	VR102 (C-1)
INPUT	REF IN : 100% colour bar (without burst: Component Y)
MODE	EE
TAPE	-------------
M.EQ	Oscilloscope, Waveform Monitor

1. Connect the oscilloscope CH1 to TP102 and CH2 to TP651.
2. Adjust VR102 so that the timing of the phase at TP102 and TP651 are as shown in below.



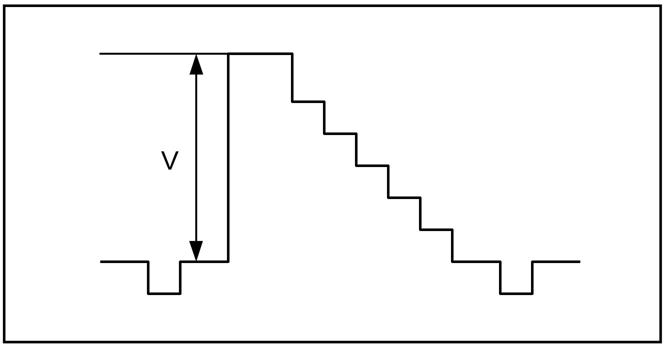
3. Set the waveform monitor in the EXT-REF mode.
4. Adjust VR102 so that the phase synchronized between REF IN (CHA) and Video 1 Out (CHB) as shown in figure.



7-17. Component Y Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	V = 700mV ± 7mV
TEST	COMPONENT Y OUT
ADJ.	VR700 (I-1)
INPUT	-------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

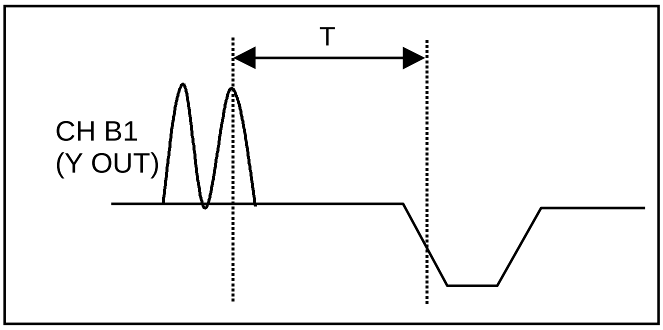
1. Adjust VR700 so that the V level is 700mV ± 7mV.



7-18. Video Phase Adjustment

P.C.B.	V_OUT (F4)
SPEC.	T = 0.96 ± 0.02usec
TEST	Y OUT
ADJ.	VR260 (A-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3680KM (Area Marker portion)
M.EQ	Waveform Monitor

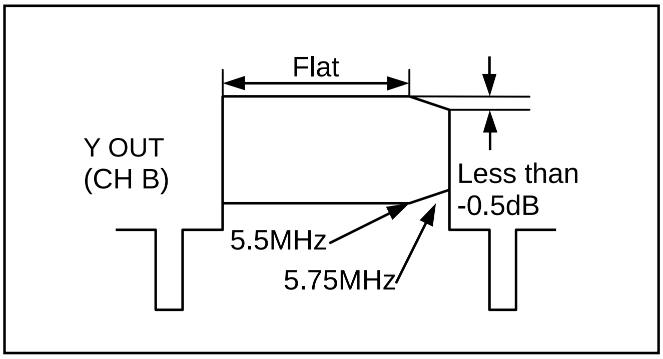
1. Open the Video Adjust menu on Service menu and set item "D01:VIDEO BLANK" to OFF position.
2. Adjust VR260 so that the timing T is within specification.
3. After finish this adjustment, set to ON position of item "D01:VIDEO BLANK".



7-19. Component Y Frequency Response Adjustment

P.C.B.	V_OUT (F4)
SPEC.	5.5MHz = Less than –0.5dB
TEST	COMPONENT PB OUT
ADJ.	VR701 (I-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3680KM (H Sweep portion)
M.EQ	Waveform Monitor

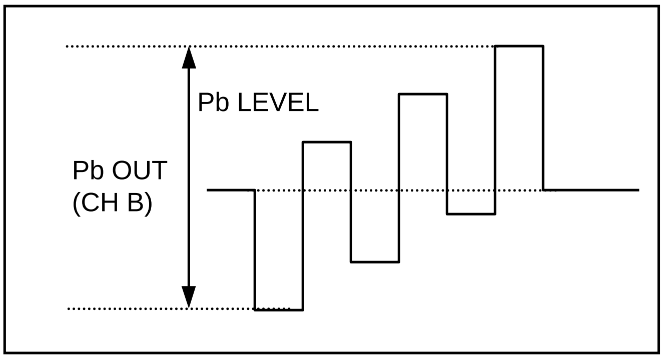
1. Adjust VR701 so that the frequency response becomes flat.



7-20. Component Pb Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	700mV ± 7mV
TEST	COMPONENT PB OUT
ADJ.	VR706 (J-1)
INPUT	------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

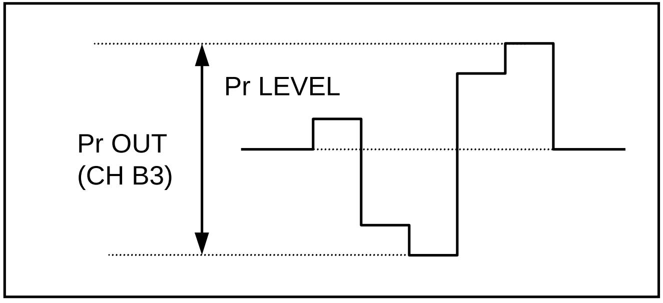
1. Adjust VR706 so that the Pb level of component out is within specification.



7-21. Component Pr Level Adjustment

P.C.B.	V_OUT (F4)
SPEC.	700mV ± 7mV
TEST	COMPONENT Pr OUT
ADJ.	VR704 (H-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3680KM (100% Colour Bar portion)
M.EQ	Waveform Monitor

1. Adjust VR704 so that the Pr level of component out is within specification.

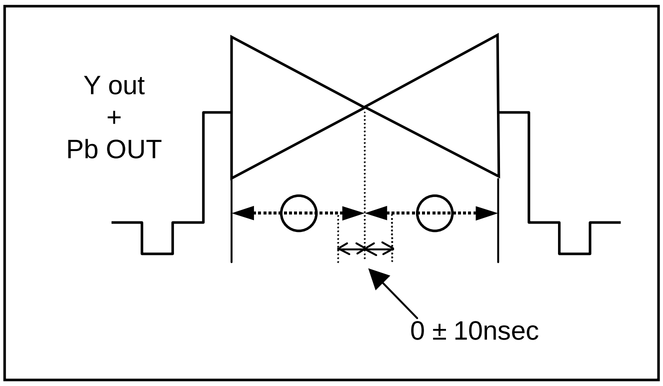


7-22. Component Y/Pb Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec
TEST	COMPONENT Y OUT, PB OUT
ADJ.	VR705 (J-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3680KM (Bowtie portion)
M.EQ	Waveform Monitor

1. Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).
2. Adjust VR705 so that the cross point of the envelope is at the center.

Note: Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have "ADD" and "INVERT" switch, please use those switch for make below waveform.

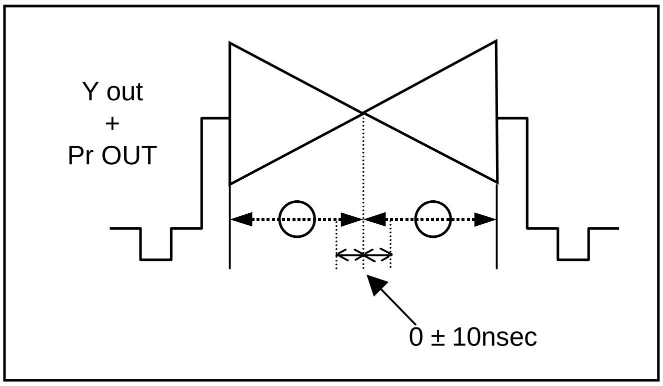


7-23. Component Y/Pr Timing Adjustment

P.C.B.	V_OUT (F4)
SPEC.	0 ± 10nsec
TEST	COMPONENT Y OUT, Pr OUT
ADJ.	VR702 (H-2)
INPUT	------------
MODE	PLAY
TAPE	VFM3680KM (Bowtie portion)
M.EQ	Waveform Monitor

1. Set the waveform monitor in the YC timing measuring mode (CH B1 + CH B2).
2. Adjust VR702 so that the cross point of the envelope is at the center.

Note: Incase of WFM monitor does not have Y-Pb timing adjustment mode, if the oscilloscope have "ADD" and "INVERT" switch, please use those switch for make below waveform.



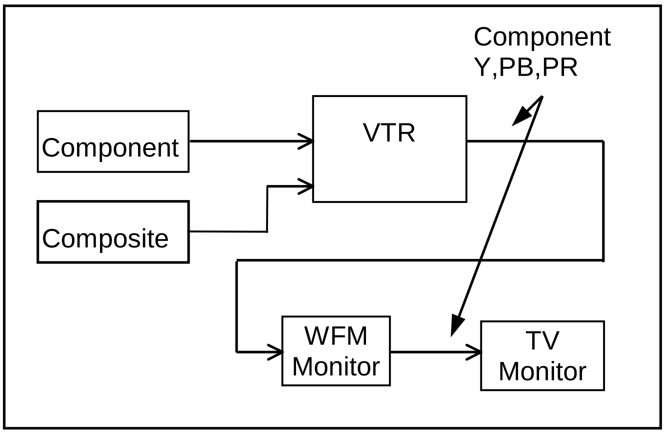
8. V IN P. C. Board [FOR NTSC ONLY]

8-1. Preparation for Video In Adjustment

1. Connect the equipment as shown in the figure.
2. V IN P.C.Board adjustment should be performed after the V OUT P.C.Board adjustment.
3. Set the menu and SW as follows.

SET UP MENU 613: V IN SETUP → THOU
614: V OUT SETUP → THOU
600: PB PR IN LV → M II

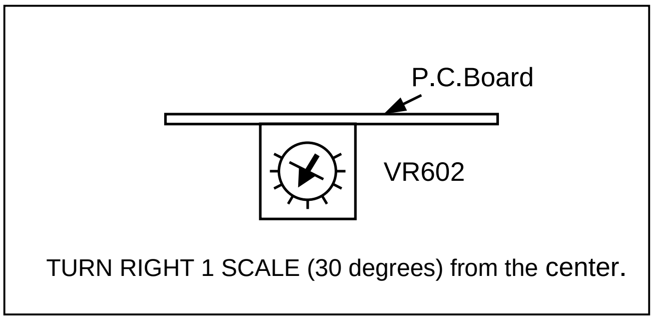
- SW950 → M II (V OUT P.C.Board.)


Component
Y,PB,PR
Component
VTR
Composite
WFM
Monitor
TV
Monitor

8-2. 13.5MHz VCO Adjustment

P.C.B.	V_IN (F6)
SPEC.	0V ± 0.1V
TEST	TP601
ADJ.	VL601, VR602
INPUT	Component 100% Color Bar
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

1. Set VR602 below figure indicated position.
2. Adjust VL601 so that the DC Voltage is 0V ± 0.1V.

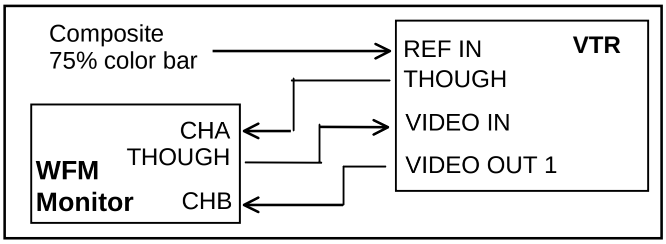

P.C.Board
VR602

TURN RIGHT 1 SCALE (30 degrees) from the center.

8-3. Component Y Timing Adjustment

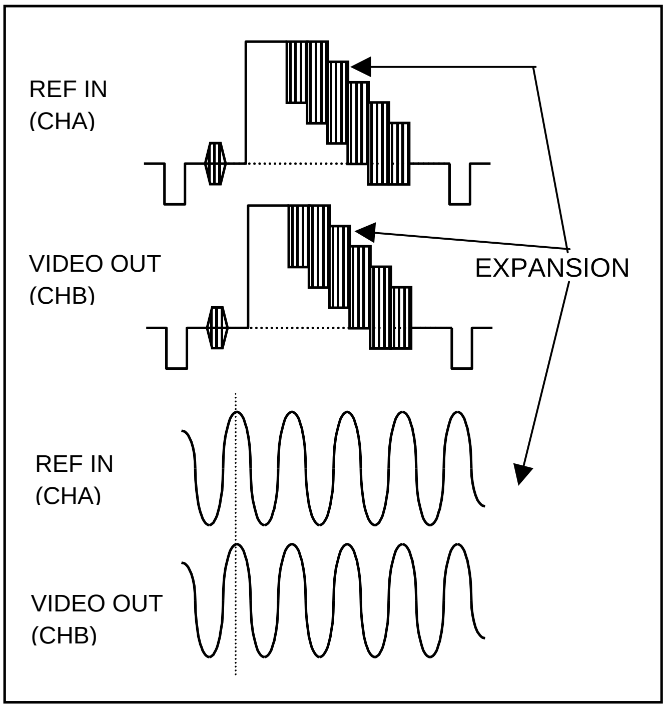
P.C.B.	V_IN (F6)
SPEC.	Phase synchronized between REF IN and VIDEO OUT 1.
TEST	REF IN, VIDEO OUT 1
ADJ.	VR601
INPUT	Composite 100% Color Bar
MODE	EE
TAPE	----------
M.EQ	WFM Monitor

1. Connect the cables as indicated as below.


Composite
75% color bar
REF IN
THOUGH
VTR
VIDEO IN
VIDEO OUT 1
CHA
THOUGH
WFM
Monitor
CHB

2. Expand the GREEN portion of color bar signal.
3. Adjust VR601 while change the CHA and CHB of WFM monitor so that the phase synchronized between CHA (REF IN) and CHB (VIDEO OUT).

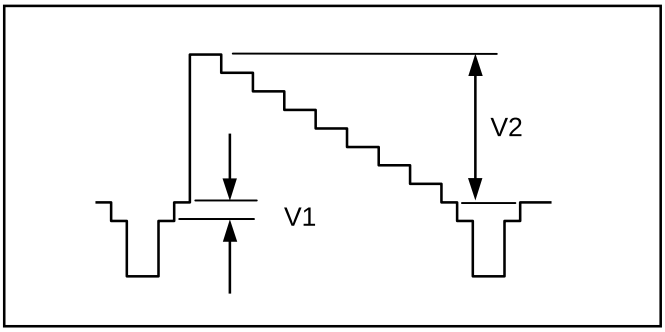
NOTE: This adjustment should be performed after V OUT P.C.Board adjustment.


REF IN
(CHA)
VIDEO OUT
(CHB)
EXPANSION
REF IN
(CHA)
VIDEO OUT
(CHB)

8-4. Component Y Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V ± 7mV, V2 = 700mV ± 7mV
TEST	Y OUT
ADJ.	VR702, VR701
INPUT	Component 100% Color Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

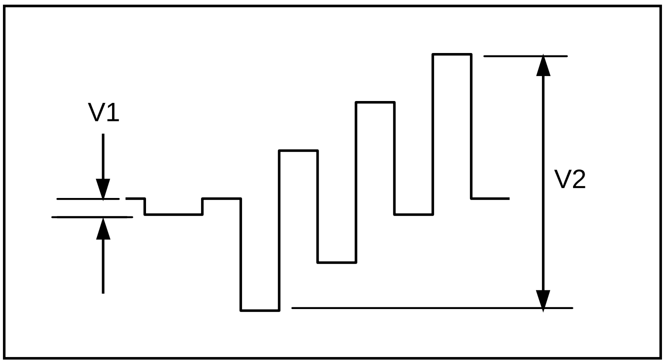
1. Adjust VR702 so that the V1 is 0V ± 7mV.
2. Adjust VR701 so that the V2 is 700mV ± 7mV.



8-5. Component PB Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V ± 7mV, V2 = 700mV ± 7mV
TEST	PB OUT
ADJ.	VR752, VR753
INPUT	Component 100% Color Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

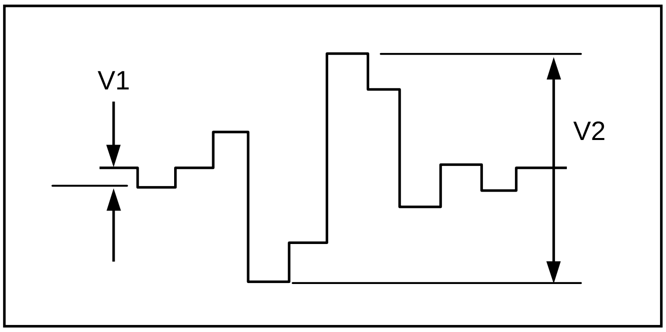
1. Adjust VR752 so that the V1 is 0 ± 7mV.
2. Adjust VR753 so that the V2 is 700m ± 7mV.



8-6. Component PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V ± 7mV, V2 = 700mV ± 7mV
TEST	PR OUT
ADJ.	VR802, VR803
INPUT	Component 100% Color Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

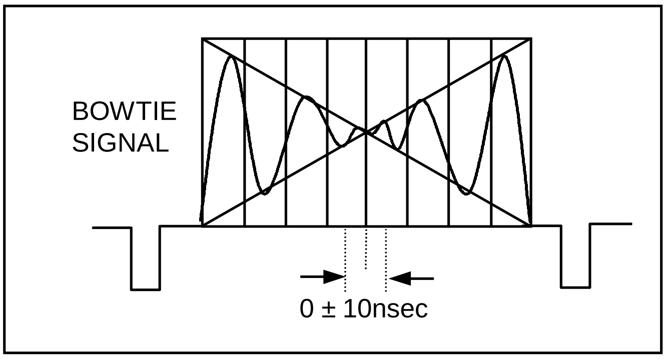
1. Adjust VR802 so that the V1 is 0V ± 7mV.
2. Adjust VR803 so that the V2 is 700mV ± 7mV.



8-7. Component Y/C Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	0 ± 10nsec
TEST	Y, PB, PR OUT
ADJ.	VR751 (PB), VR801 (PR)
INPUT	Component IN : BOWTIE
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR751 so that the minimum level of the Y/PB timing signal is 0 ± 10nsec against the center scale.
   Adjust VR801 so that the minimum level of the Y/PB timing signal is 0 ± 10nsec against the center scale.

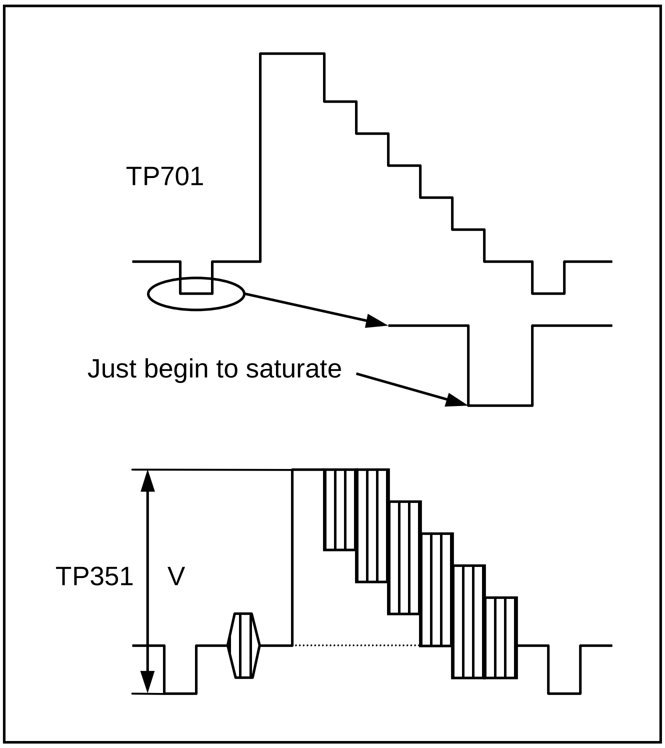


8-8. Composite Input Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 1.6V ± 0.02V
TEST	TP1(SUB P.C.B.), TP351
ADJ.	VR351, VR301
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

1. Observe TP1 and adjust VR351 at the point where the sync tip just begin to saturate.
2. Adjust VR301 so that the voltage at TP351 is 1.6V ± 0.02V.

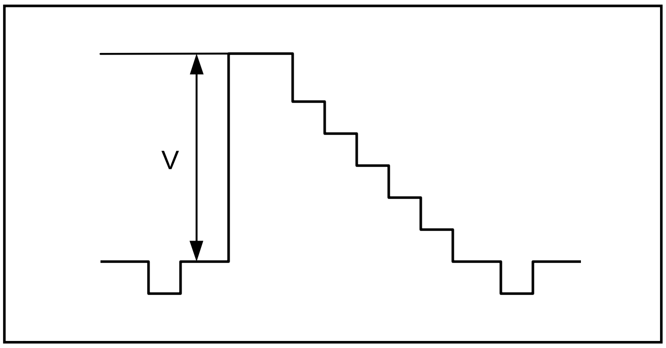
   NOTE: Oscilloscope trigger should be connect to Connector P2-16a



8-9. Composite Y Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV ± 7mV
TEST	Y OUT
ADJ.	VR352
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR455 so that the V is 700mV ± 7mV.

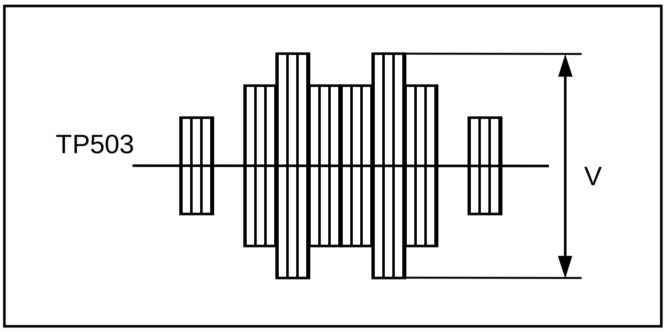


8-10.Composite Chroma Level Adj.

P.C.B.	V_IN (F6)
SPEC.	V = 400mV ± 20mV
TEST	TP503, GND:TG4
ADJ.	VR451
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR451 so that the V is 400mV ± 20mV.

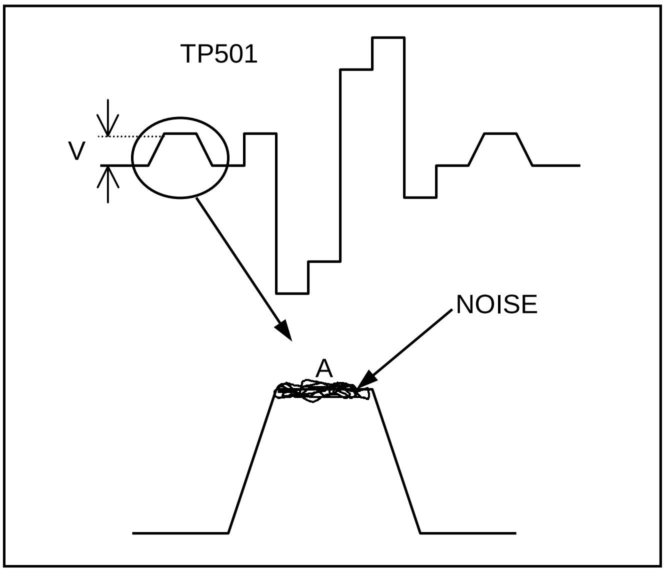
   NOTE: Oscilloscope trigger should be connect to Connector P2-16a.



8-11. Composite Color Demodulation Adjustment

P.C.B.	V_IN (F6)
SPEC.	See figure
TEST	TP501, GND:TG4
ADJ.	VR501, VR512
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

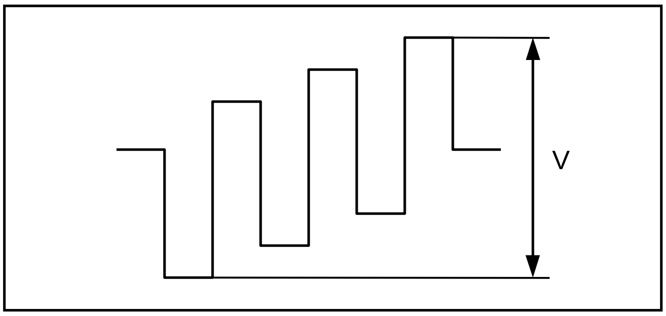
1. Turn VR512 to fully counter-clockwise.
2. Adjust VR501 so that the noise portion is positioned on the top of A portion as shown in figure.
3. Adjust VR512 so that the level V is become 0Vp-p.



8-12. Composite PB Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 486mV ± 7mV
TEST	PB OUT
ADJ.	VR505
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

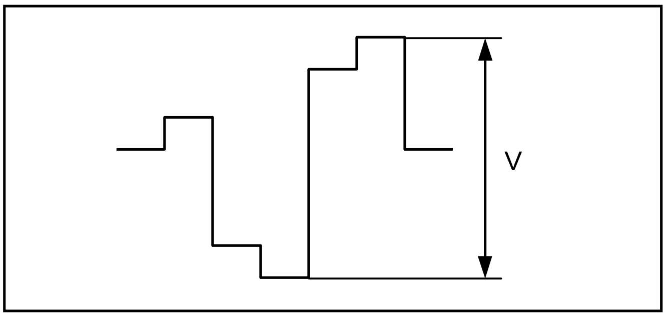
1. Adjust VR505 so that the V is 486mV ± 7mV



8-13. Composite PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 486mV ± 7mV
TEST	PR OUT
ADJ.	VR511
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR511 so that the V is 486mV ± 7mV

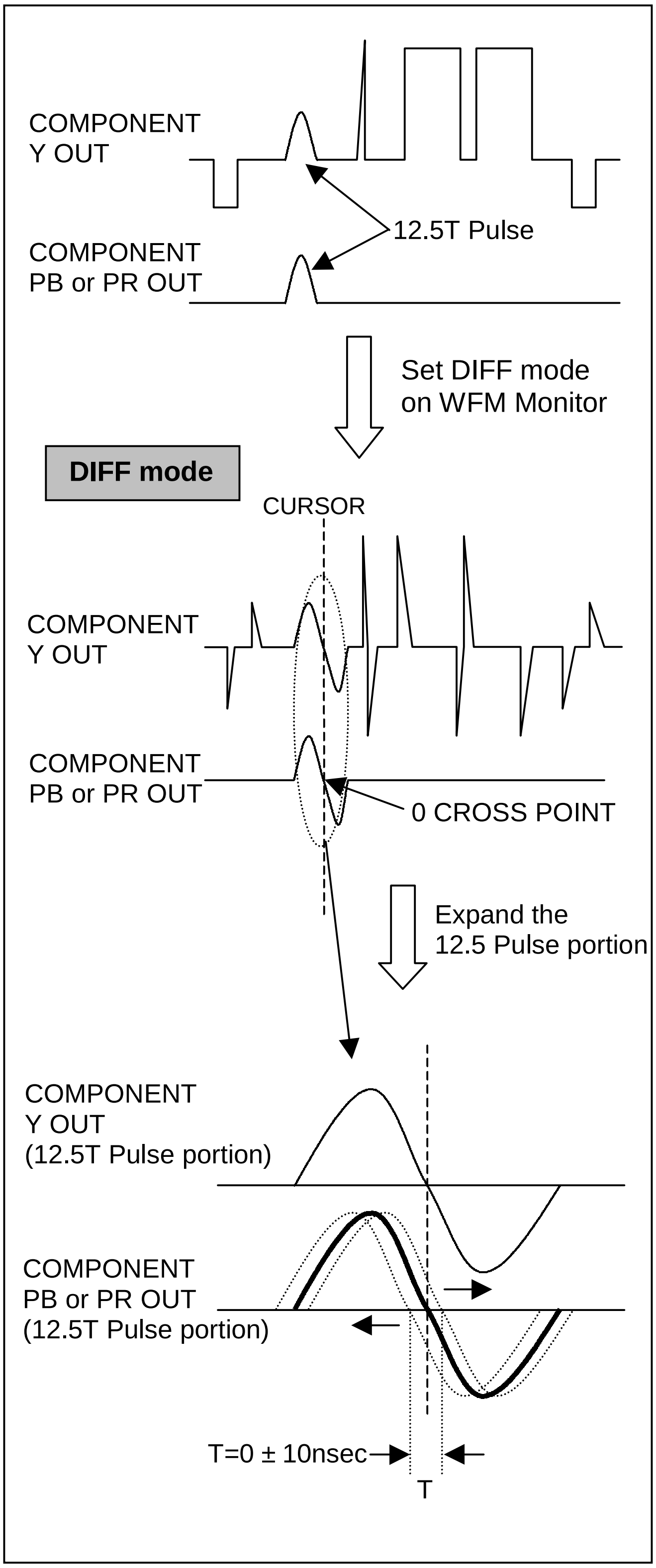


8-14. Composite YC Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	T = 0 ± 10nsec
TEST	Y PR PB OUT
ADJ.	VR510 (PB), VR507 (PR)
INPUT	Composite IN : 12.5T Pulse & Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Confirm that the 12.5T Pulse & Bar signal appeared correctly on the scope with Component Y OUT as shown in figure.
2. Confirm that the 12.5T Pulse portion appeared correctly on the scope with Component PB and PR OUT as shown in figure.
3. Set WFM monitor to DIFF mode. In case of set the DIFF mode, waveform of Y, PB and PR signals are integrated as shown in figure.
4. Expand the 12.5 pulse portion (an ellipse dotted portion as indicated as figure) and set the cursor to 0 cross point as shown in figure.
5. Sine-wave is appeared on the scope by expansion as shown in figure.
6. Adjust VR510(PB) and VR507(PR) so that the phase synchronized between Y and PB, PR signals.

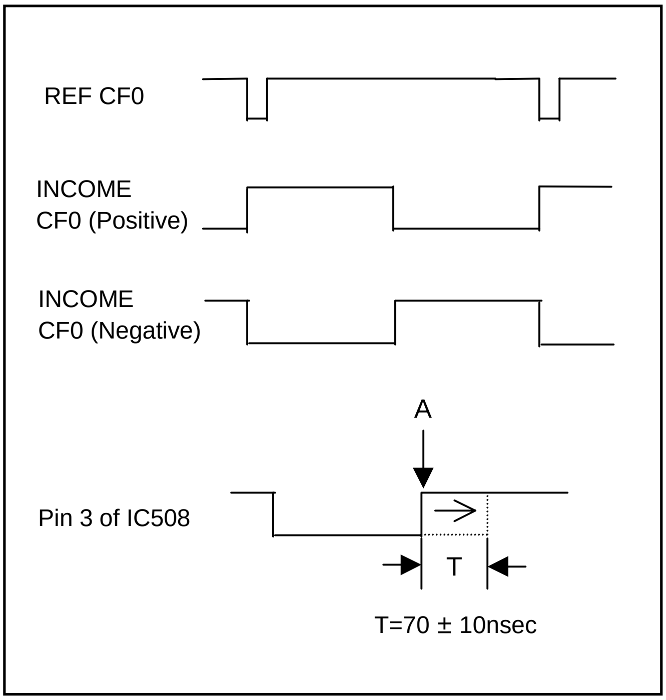
NOTE: Please use type of WFM Monitor attached DIFF mode


COMPONENT
Y OUT
12.5T Pulse
COMPONENT
PB or PR OUT
Set DIFF mode
on WFM Monitor
DIFF mode
CURSOR
COMPONENT
Y OUT
COMPONENT
PB or PR OUT
0 CROSS POINT
Expand the
12.5 Pulse portion
COMPONENT
Y OUT
(12.5T Pulse portion)
COMPONENT
PB or PR OUT
(12.5T Pulse portion)
T=0 ± 10nsec
T

8-15. Composite SCH Detection Adjustment

P.C.B.	V_IN (F6)
SPEC.	T = 70 ± 10nsec
TEST	CF OUT (TEST SIG GEN) Connector P2-8C (INCOME CF0 pulse) Pin 3 of IC508
ADJ.	VR502
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

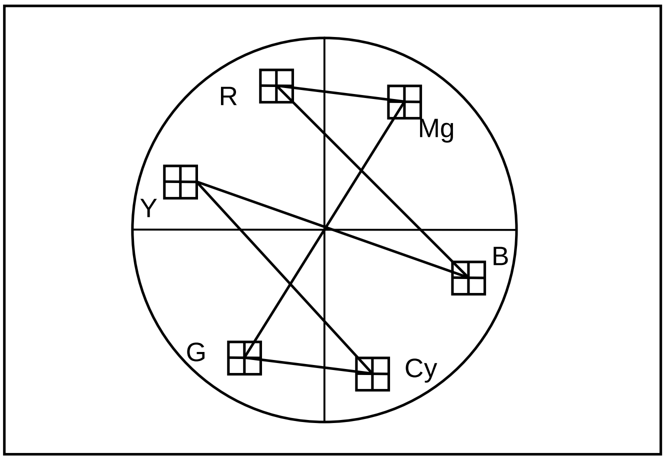
1. Set VR502 fully CCW.
2. If Income CF0 pulse does not negative pulse, slowly turn VR502 CW and set the position where the Income CF0 pulse just changes from the positive to negative phase as shown in below figure.
3. Set the VR502 so that the phase of Income CF0 pulse just changes from the negative to positive position as shown in below figure.
4. Slowly turn VR502 CW so that the rising edge A delayed 70usec ± 10nsec as shown in below figure.



8-16. Composite Vector Adjustment

P.C.B.	V_IN (F6)
SPEC.	All vector dots are In Inner Boxes
TEST	COMPOSITE OUT
ADJ.	VR512
INPUT	COMPOSITE 75% Color Bar (Set up 7.5%)
MODE	EE
TAPE	----------
M.EQ	Vector Scope

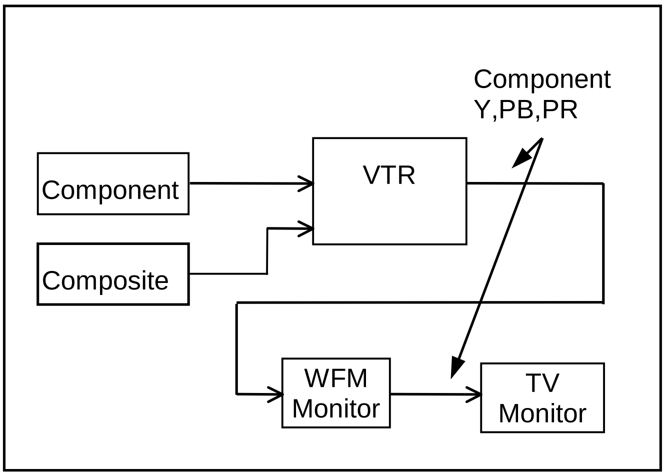
1. Adjust VR512 so that the all vector dots are in the inner boxes.



8. V IN P. C. Board [FOR PAL ONLY]

8-1. Preparation for Video In Adjustment

1. Connect the equipment as shown in the figure.
2. V IN P.C.Board adjustment should be performed after the V OUT P.C.Board adjustment.


Component
Y,PB,PR
Component
Composite
VTR
WFM
Monitor
TV
Monitor

8-2. 13.5MHz VCO Adjustment

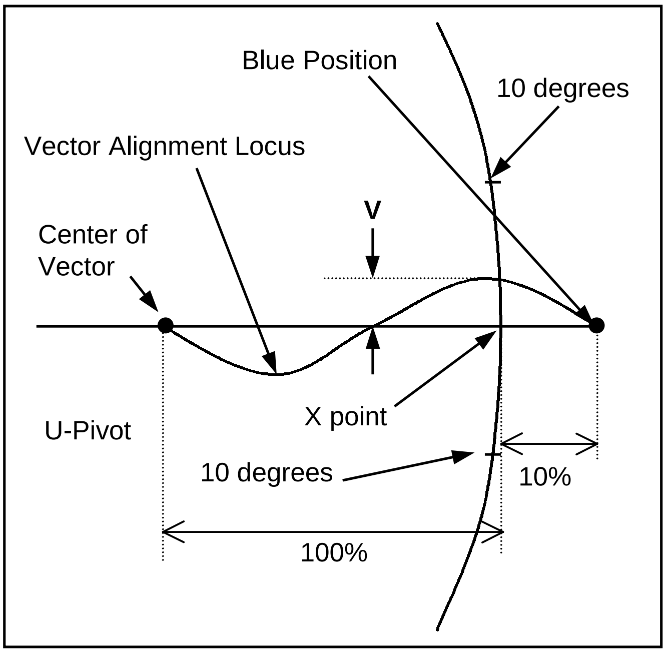
P.C.B.	V_IN (F6)
SPEC.	0V ± 0.1V
TEST	TP553, GND:TG6
ADJ.	VL551, VR552
INPUT	Component 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

1. Set VR552 to the center.
2. Adjust VL551 so that the DC Voltage is 0V ± 0.1V.

8-3. Component Y Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = ± 0.5 degree
TEST	VIDEO OUT 1
ADJ.	VR551
INPUT	Composite 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Vector Scope

1. Connect the vector scope to composite out terminal.
2. Expand the Vector Alignment Locus, where the blue point position on vector scale(X point as shown in below figure) and set the Vector Alignment Locus on the u-pivot by adjust gain and phase VR on the vector scope.
3. Expand the Vector Alignment Locus 10% as compare with 100% as shown in below figure.
4. Adjust VR551 so that the vector adjustment locus is become straight, it should be in specification.


Blue Position
10 degrees
Vector Alignment Locus
V
Center of
Vector
U-Pivot
X point
10 degrees
10%
100%

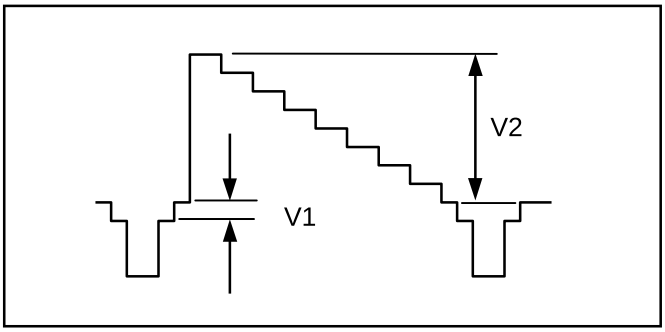
NOTE: In case of use VM700A.

1. Set the blue point position to tip of U-Pivot.
2. Set the Average is ON of VM700A
3. Adjust VR551 so that the vector adjustment locus is match to X point, and it should be in specification.

8-4. Component Y Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V ± 7mV, V2 = 700mV ± 7mV
TEST	Y OUT
ADJ.	VR652, VR651
INPUT	Component 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

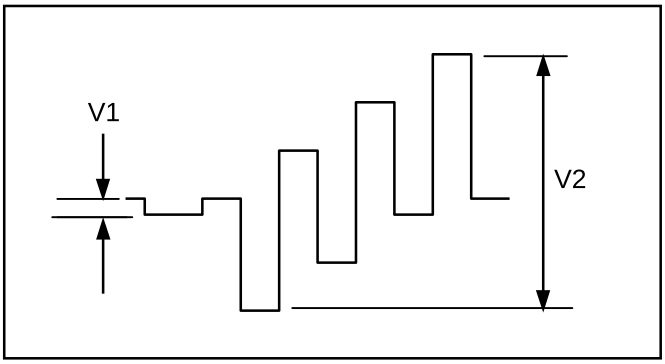
1. Adjust VR652 so that the V1 is 0V ± 7mV.
3. Adjust VR651 so that the V2 is 700mV ± 7mV.



8-5. Component PB Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V ± 7mV, V2 = 700mV ± 7mV
TEST	PB OUT
ADJ.	VR703, VR702
INPUT	Component 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

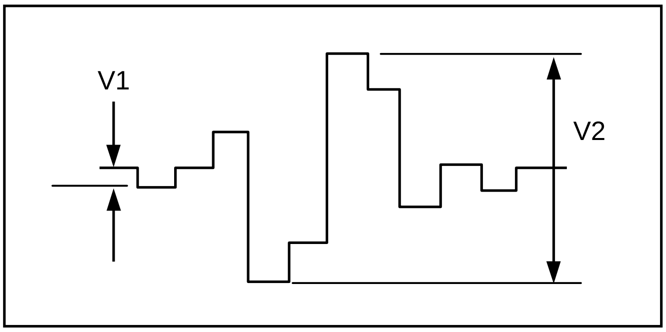
1. Adjust VR703 so that the V1 is 0 ± 7mV.
2. Adjust VR702 so that the V2 is 700m ± 7mV.



8-6. Component PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 0V ± 7mV, V2 = 700mV ± 7mV
TEST	PR OUT
ADJ.	VR753, VR752
INPUT	Component 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

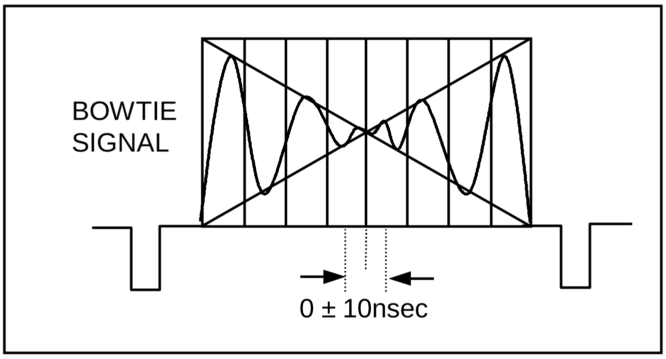
1. Adjust VR753 so that the V1 is 0V ± 7mV.
2. Adjust VR752 so that the V2 is 700mV ± 7mV.



8-7. Component Y/C Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	0 ± 10nsec
TEST	Y, PB, PR OUT
ADJ.	VR701 (PB), VR751 (PR)
INPUT	Component IN : BOWTIE
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR701 so that the minimum level of the Y/PB timing signal is 0 ± 10nsec against the center scale.
   Adjust VR751 so that the minimum level of the Y/PB timing signal is 0 ± 10nsec against the center scale.

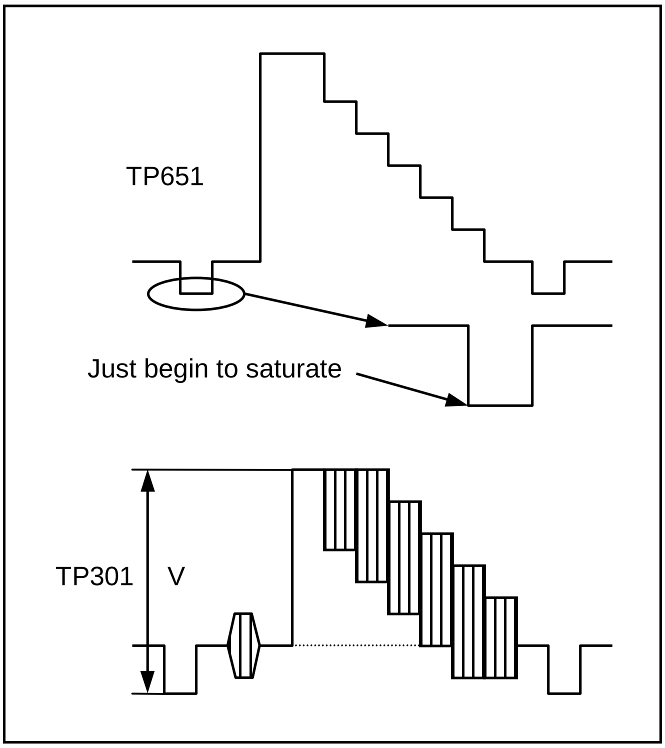


8-8. Composite Input Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V1 = 1.6V ± 0.02V
TEST	TP651, TP301, GND:TG6
ADJ.	VR301, VR251
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

1. Observe TP651 and adjust VR301 at the point where the sync tip just begin to saturate.
2. Adjust VR251 so that the voltage at TP301 is 1.6V ± 0.02V.

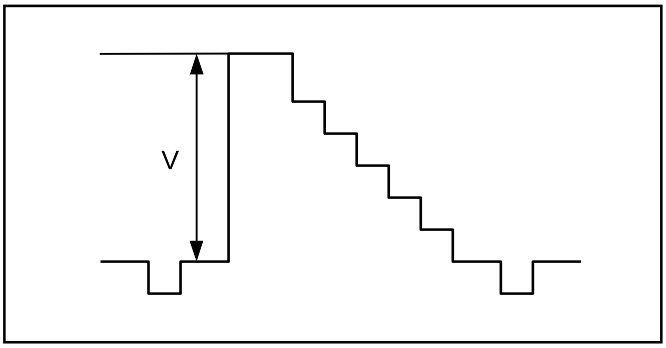
   NOTE: Oscilloscope trigger should be connect to Connector P2-16a



8-9. Composite Y Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV ± 7mV
TEST	Y OUT
ADJ.	VR352
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR352 so that the V is 700mV ± 7mV.

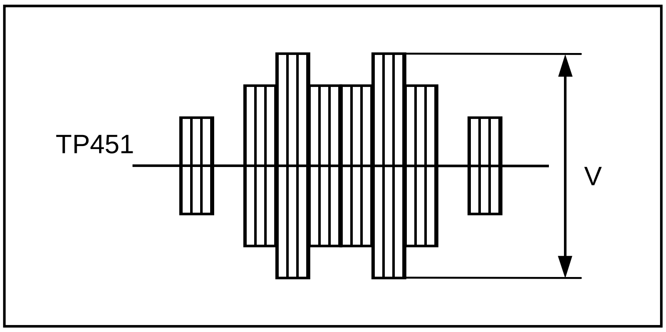


8-10. Composite Chroma Level Adj.

P.C.B.	V_IN (F6)
SPEC.	V = 500mV ± 20mV
TEST	TP451, GND:TG6
ADJ.	VR351
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR351 so that the V is 500mV ± 20mV.

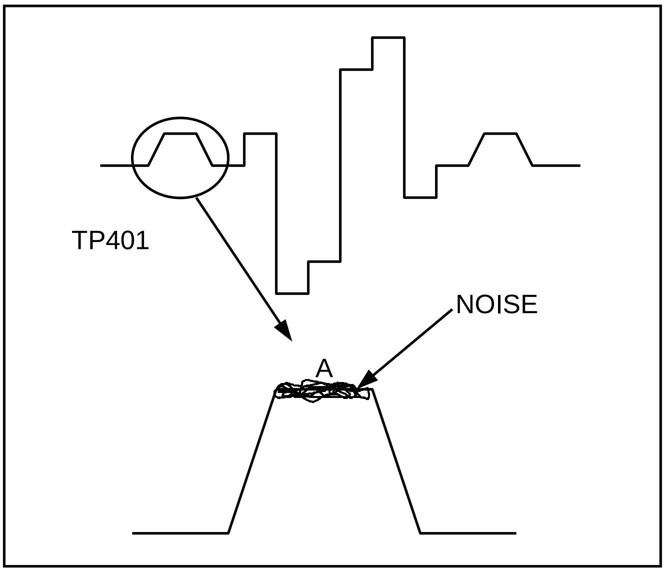
   NOTE: Oscilloscope trigger should be connect to Connector P2-16a.



8-11. Composite Colour Demodulation Adjustment

P.C.B.	V_IN (F6)
SPEC.	See figure
TEST	TP401, GND:TG6
ADJ.	VR408, VR409
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

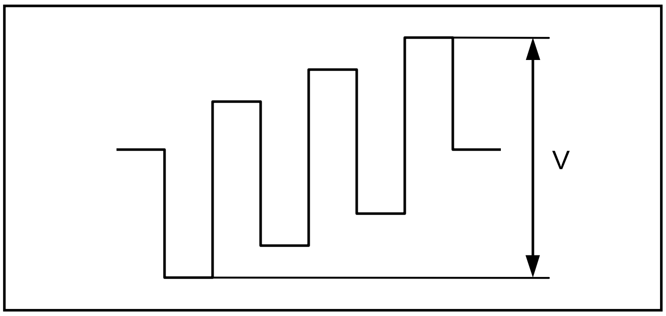
1. Adjust VR409 so that the waveform is as shown in figure (no double image).
2. Adjust VR408 so that the noise portion is positioned on the top of A portion as shown in figure.



8-12. Composite PB Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV ± 7mV
TEST	PB OUT
ADJ.	VR460
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

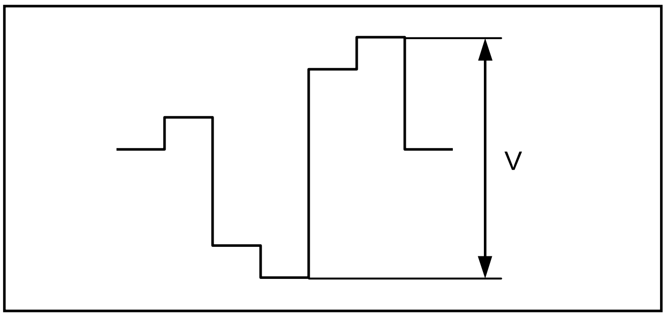
1. Adjust VR460 so that the V is 700mV ± 7mV



8-13. Composite PR Level Adjustment

P.C.B.	V_IN (F6)
SPEC.	V = 700mV ± 7mV
TEST	PR OUT
ADJ.	VR464
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Adjust VR464 so that the V is 700mV ± 7mV

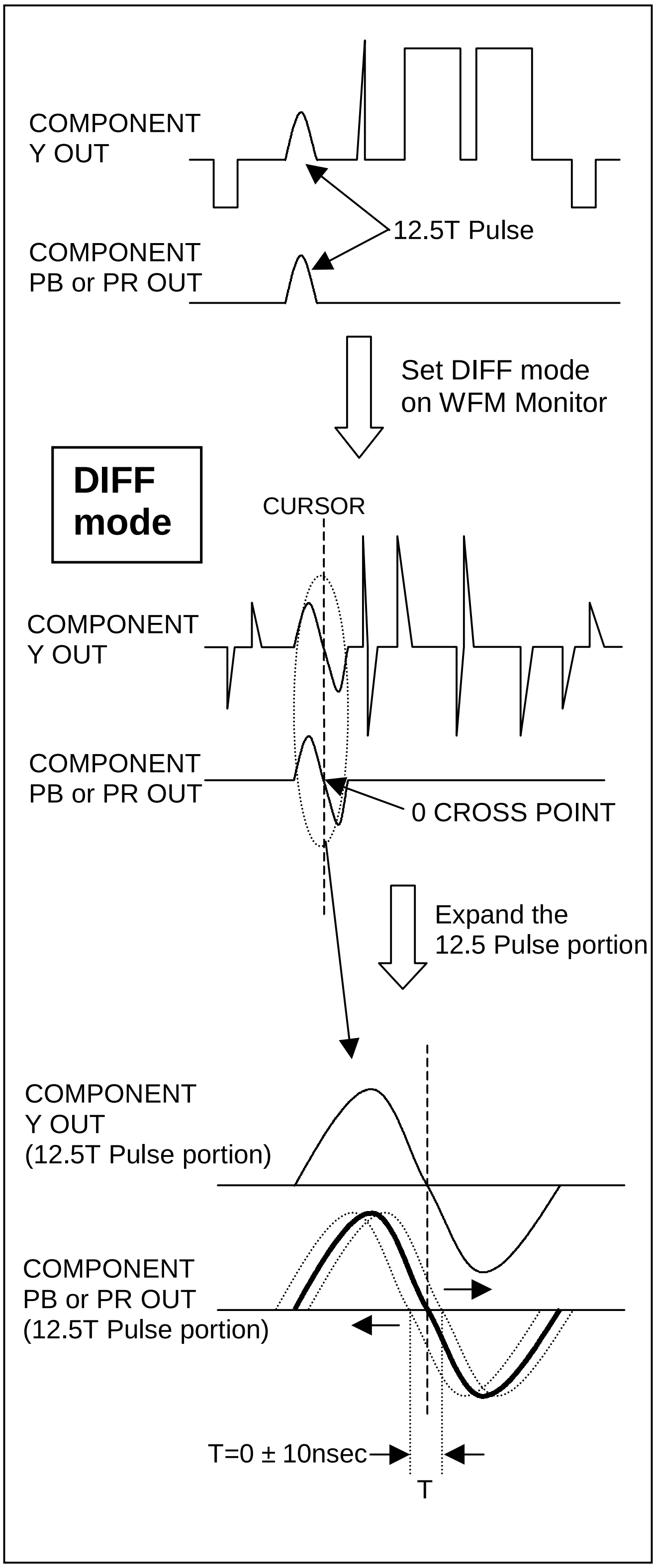


8-14. Composite YC Timing Adjustment

P.C.B.	V_IN (F6)
SPEC.	T = 0 ± 10nsec
TEST	Y PR PB OUT
ADJ.	VR459 (PB), VR463 (PR)
INPUT	Composite IN : 12.5T Pulse & Bar
MODE	EE
TAPE	----------
M.EQ	Waveform Monitor

1. Confirm that the 12.5T Pulse & Bar signal appeared correctly on the scope with Component Y OUT as shown in figure.
2. Confirm that the 12.5T Pulse portion appeared correctly on the scope with Component PB and PR OUT as shown in figure.
3. Set WFM monitor to DIFF mode. In case of set the DIFF mode, waveform of Y, PB and PR signals are integrated as shown in figure.
4. Expand the 12.5 pulse portion (an ellipse dotted portion as indicated as figure) and set the cursor to 0 cross point as shown in figure.
5. Sine-wave is appeared on the scope by expansion as shown in figure.
6. Adjust VR459 (PB) and VR463 (PR) so that the phase synchronized between Y and PB, PR signals.

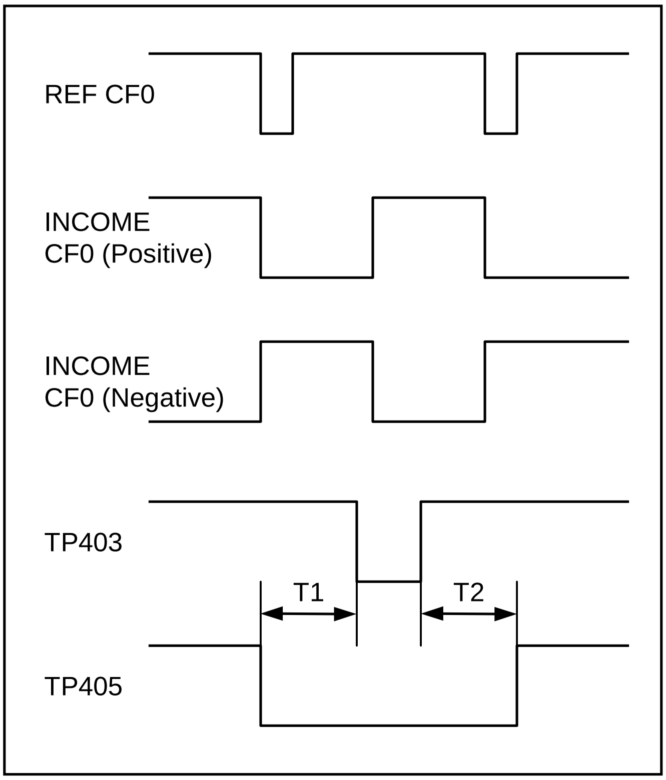
NOTE: Please use type of WFM Monitor attached DIFF mode


COMPONENT
Y OUT
12.5T Pulse
COMPONENT
PB or PR OUT
Set DIFF mode
on WFM Monitor
DIFF
mode
CURSOR
COMPONENT
Y OUT
COMPONENT
PB or PR OUT
0 CROSS POINT
Expand the
12.5 Pulse portion
COMPONENT
Y OUT
(12.5T Pulse portion)
COMPONENT
PB or PR OUT
(12.5T Pulse portion)
T=0 ± 10nsec
T

8-15. Composite SCH Detection Adjustment

P.C.B.	V_IN (F6)
SPEC.	T1 = T2 : ± 0.5msec
TEST	CF OUT (TEST SIG GEN) Connector P2-8C (INCOME CF0 pulse) TP403, TP405
ADJ.	VR407
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Oscilloscope

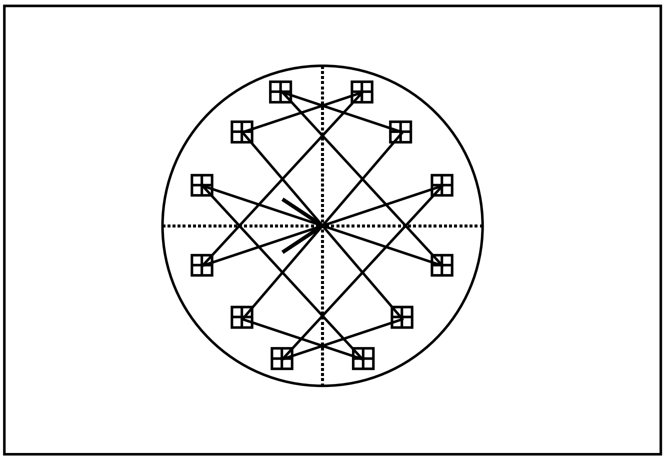
1. Set VR407 fully CCW.
2. If Income CF0 pulse does not negative pulse, slowly turn VR407 CW and set the position where the Income CF0 pulse just changes from the positive to negative phase as shown in below figure.
3. Set the VR407 so that the phase of Income CF0 pulse just changes from the negative to positive position as shown in below figure.
4. Slowly turn VR407 CW so that T1 and T2 portion in specification.



8-16. Composite Vector Adjustment

P.C.B.	V_IN (F6)
SPEC.	All vector dots are in Inner Boxes
TEST	COMPOSITE OUT
ADJ.	VR409
INPUT	COMPOSITE 100% Colour Bar
MODE	EE
TAPE	----------
M.EQ	Vector Scope

1. Adjust VR409 so that the all vector dots are in the inner boxes.



9. AUDIO ADDA

9-1. Initial Setting of Audio Adjustment

< Switch Setting >

1. Set the audio impedance switches as shown below.

SW1	HIGH
SW41	HIGH

< Measurement Equipment Setting >

1. In case of use Audio Precision, please set switches as shown below.

GENERATOR

OUTPUT	A & B	BAL
	50 ohm	FLOAT

ANALYZER

CHANNEL-A	INPUT	100 kΩ
CHANNEL-B	INPUT	100 kΩ

< Service Menu Setting >

1. Set the DIP SW 1-1 to ON at the reverse side of the front panel.
2. Open the Audio Adjust menu on the Service Menu.
3. Set the items as shown below.

E01	METER REF.	Fs - 20
E05	REF. LEVEL2	0 dB
E07	MIC IN LV	ENA

4. Set the DIP SW 1-1 to OFF.

< User Menu Setting >

1. Open the AUDIO item (No. 700 series) of the SETUP-MENU and set the items as shown below.

700	CH1 IN LV	0 dB
701	CH2 IN LV	0 dB
703	CH1 OUT LV	0 dB
704	CH2 OUT LV	0 dB
706	MONI L OUT LV	0 dB
707	MONI R OUT LV	0 dB
708	MONI OUT	VAR
709	EMPHASIS	OFF
714	REC CH1	CH1
715	REC CH2	CH2
722	INT SG	OFF

9-2. Output Balance Adjustment

P.C.B.	A ADDA (F8)
SPEC.	Minimum
TEST	AUDIO OUT : CH1, CH2 MONIOUT : LCH, RCH
ADJ.	VR402 (CH1), VR477 (CH2) VR751 (LCH), VR831 (RCH)
INPUT	INT Signal
MODE	EE
TAPE	--------------
M.EQ	Oscilloscope, Monitor TV

1. Set the items on SET UP menu as shown below.

708	MONI OUT	**UNITY**
722	INT SG	**ON**

2. Connect to the oscilloscope as shown below.

Oscilloscope	Output (VTR)
CH1	HOT (AUDIO OUT, MONI OUT)
CH2	COLD (AUDIO OUT, MONI OUT)

3. Set the oscilloscope's mode to ADD, and adjust VR402 so that the CH1 waveform level is minimum.
4. Repeat above adjustment in the same way about the other channels.

9-3. Output Level Adjustment

P.C.B.	A ADDA (F8)
SPEC.	0dBu ± 0.2dBu
TEST	AUDIO OUT : CH1, CH2 MONIOUT : LCH, RCH
ADJ.	VR401 (CH1), VR476 (CH2) VR702 (LCH), VR701 (RCH)
INPUT	INT Signal
MODE	EE
TAPE	--------------
M.EQ	Oscilloscope, Audio Analyzer VTVM (Audio Precision)

1. Set the AUDIO item as shown below.

708	MONI OUT	**UNITY**
722	INT SG	**ON**

2. Adjust VR401 so that the CH1 level is in the specification.
3. Repeat above adjustment in the same way about the other channels.
4. Confirm all channels that the sine-wave output is normal.

9-4. Input CMRR Adjustment

P.C.B.	A ADDA (F8)
SPEC.	Less than –60dBu
TEST	TP201 (CH1), TP202 (CH2)
ADJ.	VR1 (CH1), VR41 (CH2)
INPUT	LINE IN (CH1,CH2) 1kHz,0dBu Sine-wave (CMTST)
MODE	EE
TAPE	--------------
M.EQ	Oscilloscope, VTVM (Audio Precision), Monitor TV

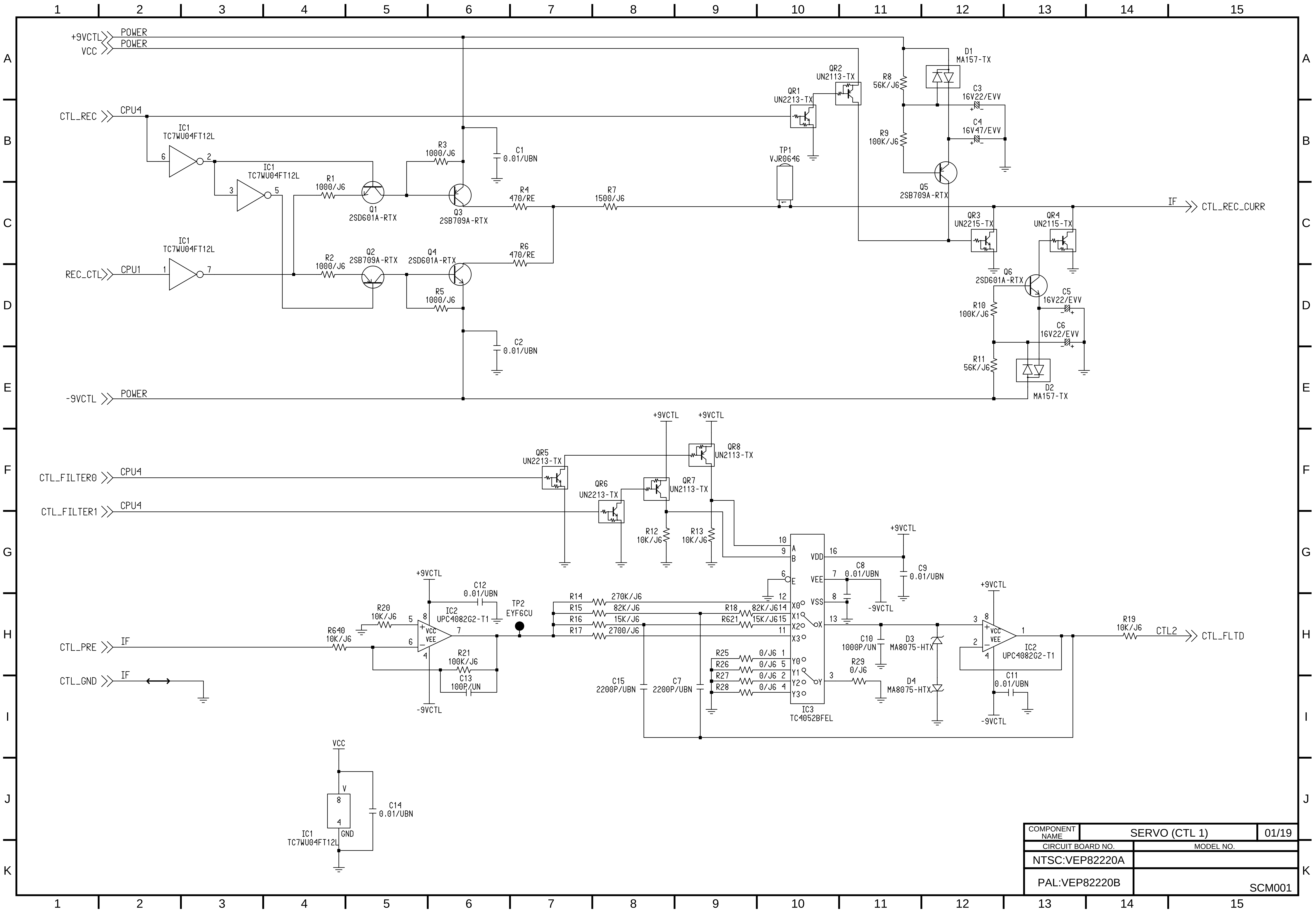
1. Connect the oscilloscope to TP201.
2. Input the sine-wave signal to HOT and COLD terminal of CH1.
3. Adjust VR1 so that the CH1 output level is minimum and in the specification.
4. Repeat adjustment in the same way about CH2.

NOTE: In case of use Audio Precision, Change the GENERATOR OUTPUT mode to CMTS from BAL.. And after adjustment, return to BAL.

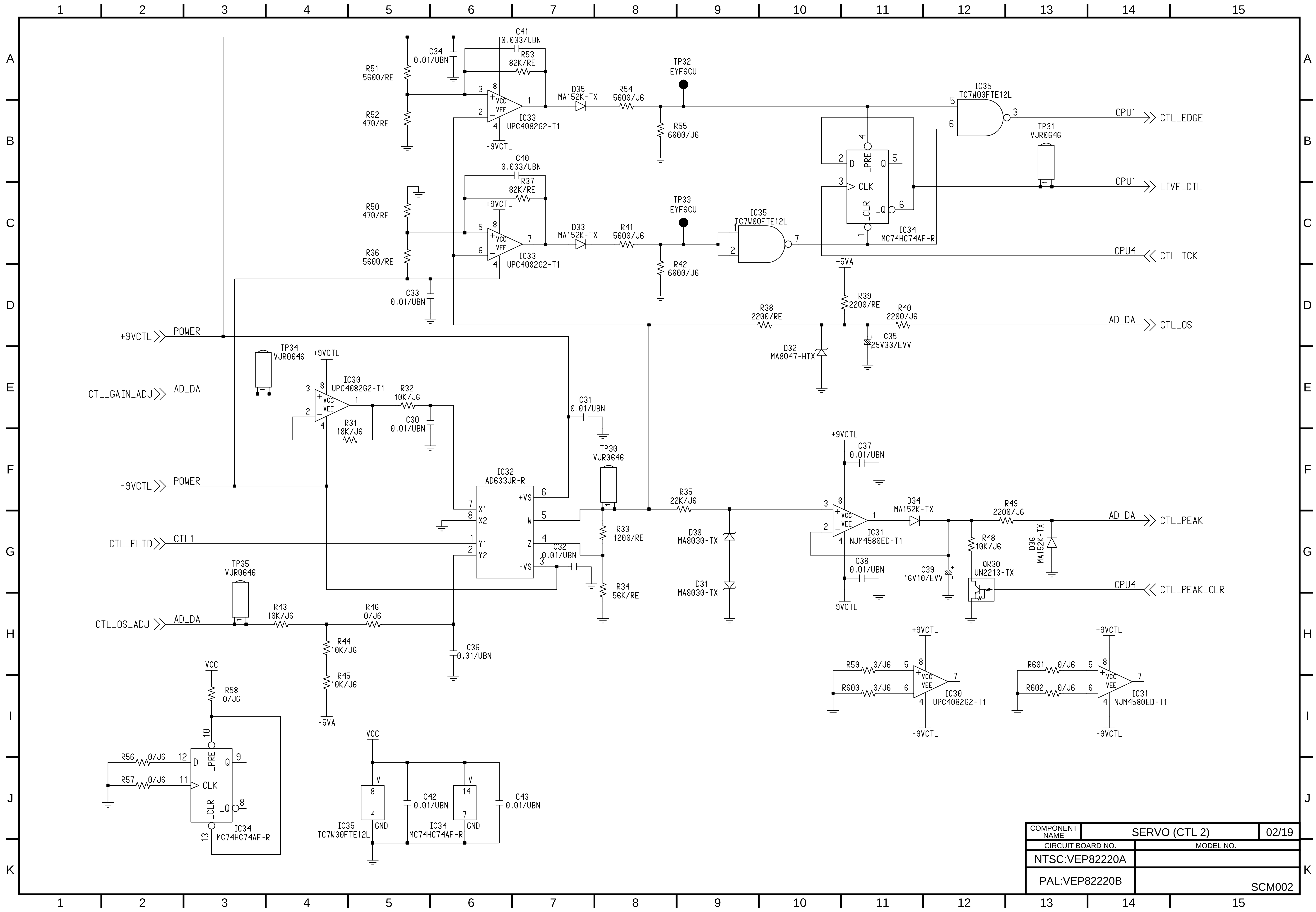
9-5. Input Level Adjustment

P.C.B.	A ADDA (F8)
SPEC.	0dBu ± 0.2dBu
TEST	AUDIO OUT (CH1, CH2)
ADJ.	VR2 (CH1), VR42 (CH2)
INPUT	LINE IN (CH1,CH2) 1kHz 0dBu Sine-wave (BAL)
MODE	EE
TAPE	----------------
M.EQ	Oscilloscope, VTVM (Audio Precision), Monitor TV

1. Adjust VR2 so that the CH1 level is in the specification.
2. Repeat adjustment in the same way about CH2.

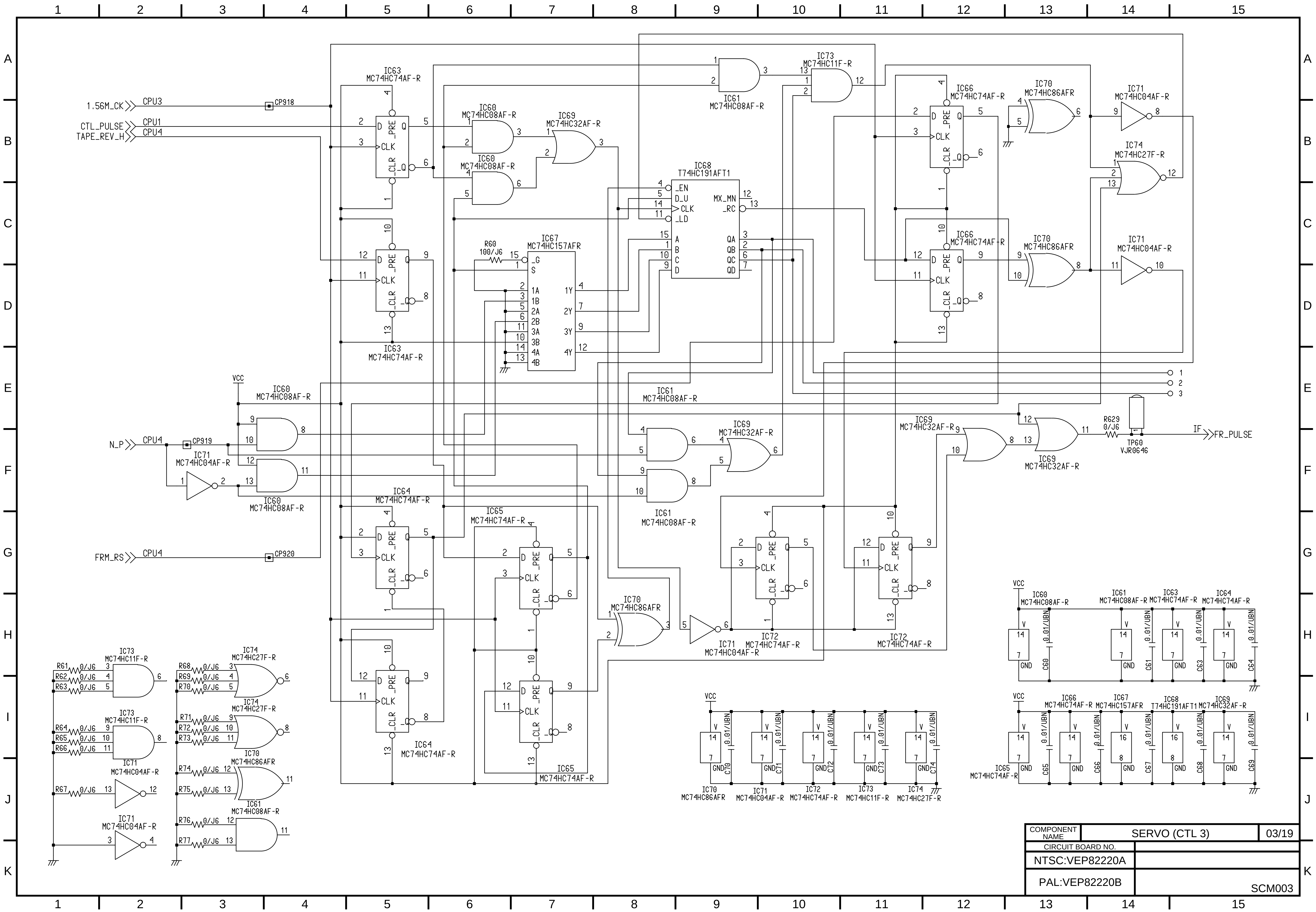

+9VCTL
POWER
VCC
POWER
CTL_REC
CPU4
REC_CTL
CPU1
-9VCTL
POWER
IC1
TC7WU04FT12L
Q1
2SD601A-RTX
Q2
2SB709A-RTX
Q3
2SB709A-RTX
Q4
2SD601A-RTX
R1
1000/J6
R2
1000/J6
R3
1000/J6
R4
470/RE
R5
1000/J6
R6
470/RE
R7
1500/J6
C1
0.01/UBN
C2
0.01/UBN
TP1
VJR0646
QR1
UN2213-TX
QR2
UN2113-TX
D1
MA157-TX
R8
56K/J6
R9
100K/J6
C3
16V22/EVV
C4
16V47/EVV
Q5
2SB709A-RTX
IF
CTL_REC_CURR
QR3
UN2215-TX
QR4
UN2115-TX
Q6
2SD601A-RTX
C5
16V22/EVV
C6
16V22/EVV
R10
100K/J6
R11
56K/J6
D2
MA157-TX
CTL_FILTER0
CTL_FILTER1
QR5
UN2213-TX
QR6
UN2213-TX
QR7
UN2113-TX
QR8
UN2113-TX
R12
10K/J6
R13
10K/J6
CTL_PRE
CTL_GND
R640
10K/J6
R20
10K/J6
IC2
UPC4082G2-T1
C12
0.01/UBN
R21
100K/J6
C13
100P/UN
TP2
EYF6CU
R14
270K/J6
R15
82K/J6
R16
15K/J6
R17
2700/J6
R18
82K/J6
R621
15K/J6
R25
R26
R27
R28
0/J6
C15
2200P/UBN
C7
2200P/UBN
IC3
TC4052BFEL
VDD
VEE
VSS
C8
0.01/UBN
C9
0.01/UBN
C10
1000P/UN
R29
0/J6
D3
MA8075-HTX
D4
MA8075-HTX
C11
0.01/UBN
R19
10K/J6
CTL2
CTL_FLTD
C14
0.01/UBN
GND

COMPONENT NAME	SERVO (CTL 1)	01/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM001	

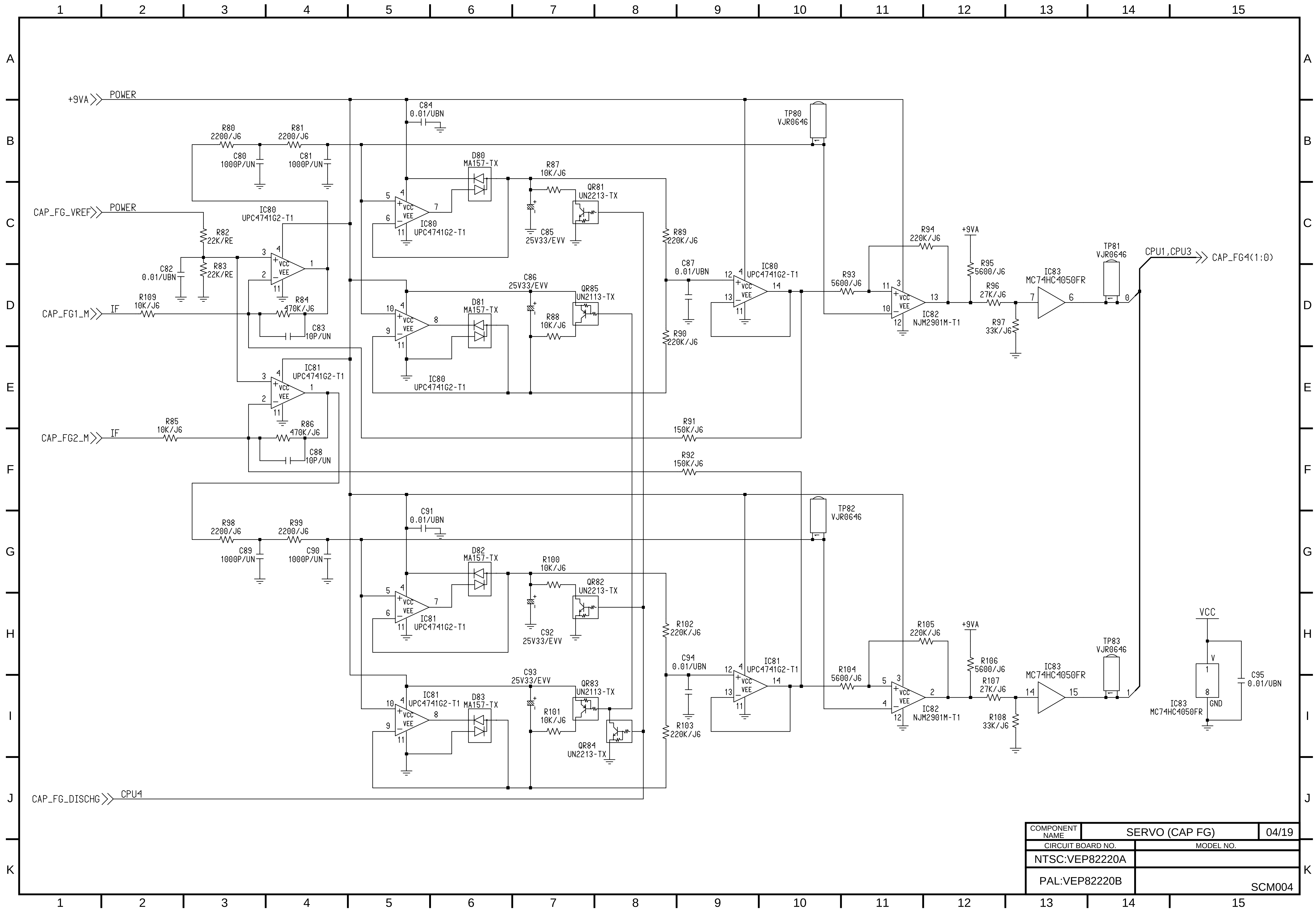

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
C41
0.033/UBN
C34
0.01/UBN
R53
82K/RE
R51
5600/RE
R52
470/RE
IC33
UPC4082G2-T1
-9VCTL
D35
MA152K-TX
R54
5600/J6
R55
6800/J6
TP32
EYF6CU
C40
0.033/UBN
R37
82K/RE
+9VCTL
R50
470/RE
R36
5600/RE
IC33
UPC4082G2-T1
D33
MA152K-TX
R41
5600/J6
R42
6800/J6
TP33
EYF6CU
C33
0.01/UBN
IC35
TC7W00FTE12L
IC35
TC7W00FTE12L
CPU1
CTL_EDGE
TP31
VJR0646
CPU1
LIVE_CTL
IC34
MC74HC74AF-R
D
_PRE
Q
CLK
_CLR
_Q
CPU4
CTL_TCK
+5VA
R39
2200/RE
R38
2200/RE
R40
2200/J6
AD DA
CTL_OS
D32
MA8047-HTX
C35
25V33/EVV
+9VCTL
POWER
TP34
VJR0646
+9VCTL
IC30
UPC4082G2-T1
CTL_GAIN_ADJ
AD_DA
R32
10K/J6
C30
0.01/UBN
R31
18K/J6
C31
0.01/UBN
-9VCTL
POWER
IC32
AD633JR-R
X1
X2
Y1
Y2
+VS
W
Z
-VS
C32
0.01/UBN
TP30
VJR0646
R33
1200/RE
R34
56K/RE
CTL_FLTD
CTL1
TP35
VJR0646
CTL_OS_ADJ
AD_DA
R43
10K/J6
R46
0/J6
R44
10K/J6
R45
10K/J6
-5VA
C36
0.01/UBN
R35
22K/J6
D30
MA8030-TX
D31
MA8030-TX
+9VCTL
C37
0.01/UBN
IC31
NJM4580ED-T1
D34
MA152K-TX
R49
2200/J6
AD DA
CTL_PEAK
D36
MA152K-TX
R48
10K/J6
C38
0.01/UBN
-9VCTL
C39
16V10/EVV
QR30
UN2213-TX
CPU4
CTL_PEAK_CLR
+9VCTL
R59
0/J6
R600
0/J6
IC30
UPC4082G2-T1
-9VCTL
+9VCTL
R601
0/J6
R602
0/J6
IC31
NJM4580ED-T1
-9VCTL
VCC
R58
0/J6
R56
0/J6
R57
0/J6
CLK
IC34
MC74HC74AF-R
VCC
IC35
TC7W00FTE12L
C42
0.01/UBN
IC34
MC74HC74AF-R
C43
0.01/UBN
V
GND
VCC
VEE

COMPONENT NAME	SERVO (CTL 2)	02/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B		

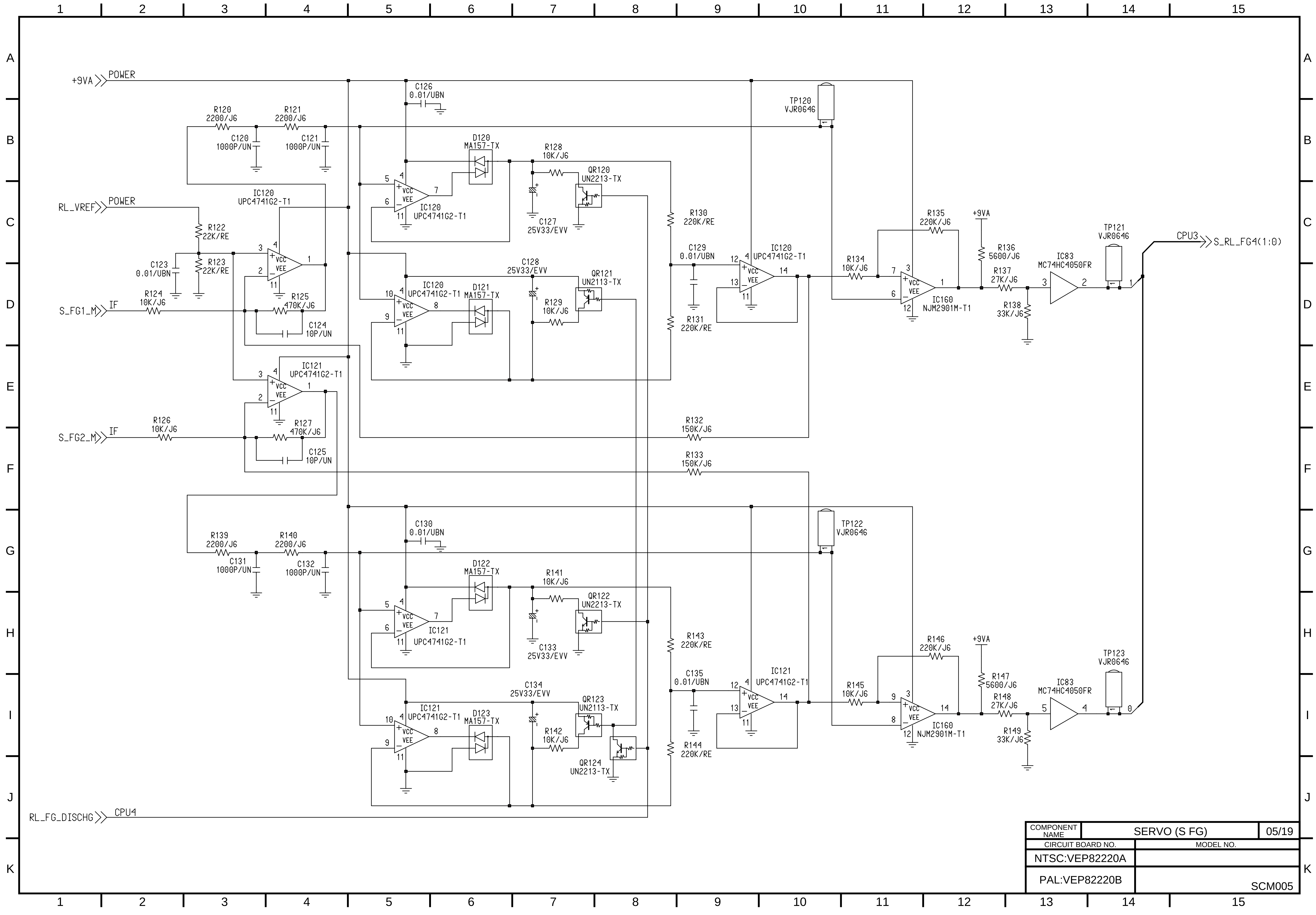
SCM002


1.56M_CK
CPU3
CP918
CTL_PULSE
CPU1
TAPE_REV_H
CPU4
N_P
CPU4
CP919
FRM_RS
CPU4
CP920
IF
FR_PULSE
R629
0/J6
TP60
VJR0646
IC60 MC74HC08AF-R
IC61 MC74HC08AF-R
IC63 MC74HC74AF-R
IC64 MC74HC74AF-R
IC65 MC74HC74AF-R
IC66 MC74HC74AF-R
IC67 MC74HC157AFR
IC68 T74HC191AFT1
IC69 MC74HC32AF-R
IC70 MC74HC86AFR
IC71 MC74HC04AF-R
IC72 MC74HC74AF-R
IC73 MC74HC11F-R
IC74 MC74HC27F-R
R60 100/J6
_EN
D_U
CLK
_LD
MX_MN
_RC
A
B
C
D
QA
QB
QC
QD
_G
S
1A 1B 2A 2B 3A 3B 4A 4B
1Y 2Y 3Y 4Y
D
Q
_Q
_PRE
_CLR
VCC
1
2
3
R61 R62 R63 R64 R65 R66 R67 R68 R69 R70 R71 R72 R73 R74 R75 R76 R77
0/J6
0.01/UBN
C60 C61 C63 C64 C65 C66 C67 C68 C69 C70 C71 C72 C73 C74
V
GND
14
7
16
8

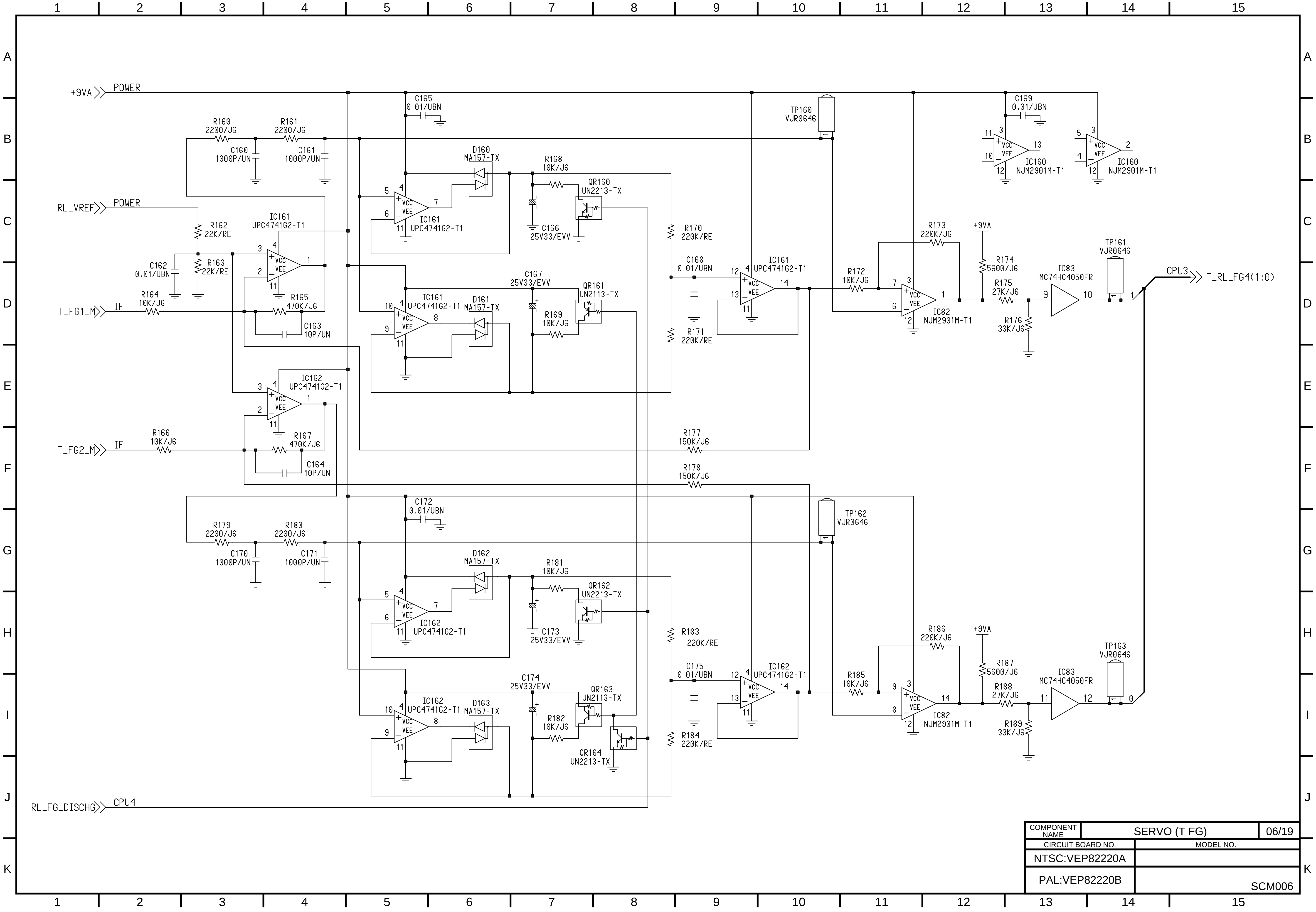
COMPONENT NAME	SERVO (CTL 3)	03/19
CIRCUIT BOARD NO.		
NTSC:VEP82220A		
PAL:VEP82220B	SCM003	


+9VA
POWER
CAP_FG_VREF
POWER
CAP_FG1_M
IF
CAP_FG2_M
IF
CAP_FG_DISCHG
CPU4
R80 2200/J6
R81 2200/J6
C80 1000P/UN
C81 1000P/UN
C84 0.01/UBN
D80 MA157-TX
R87 10K/J6
QR81 UN2213-TX
C85 25V33/EVV
IC80 UPC4741G2-T1
R82 22K/RE
R83 22K/RE
C82 0.01/UBN
R109 10K/J6
R84 470K/J6
C83 10P/UN
C86 25V33/EVV
D81 MA157-TX
QR85 UN2113-TX
R88 10K/J6
R89 220K/J6
R90 220K/J6
C87 0.01/UBN
TP80 VJR0646
R93 5600/J6
R94 220K/J6
R95 5600/J6
R96 27K/J6
R97 33K/J6
IC82 NJM2901M-T1
IC83 MC74HC4050FR
TP81 VJR0646
CPU1,CPU3
CAP_FG4(1:0)
IC81 UPC4741G2-T1
R85 10K/J6
R86 470K/J6
C88 10P/UN
R91 150K/J6
R92 150K/J6
C91 0.01/UBN
TP82 VJR0646
R98 2200/J6
R99 2200/J6
C89 1000P/UN
C90 1000P/UN
D82 MA157-TX
R100 10K/J6
QR82 UN2213-TX
C92 25V33/EVV
R102 220K/J6
R103 220K/J6
C94 0.01/UBN
C93 25V33/EVV
D83 MA157-TX
QR83 UN2113-TX
R101 10K/J6
QR84 UN2213-TX
R104 5600/J6
R105 220K/J6
R106 5600/J6
R107 27K/J6
R108 33K/J6
TP83 VJR0646
VCC
C95 0.01/UBN
IC83 MC74HC4050FR
V
GND
VCC
VEE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

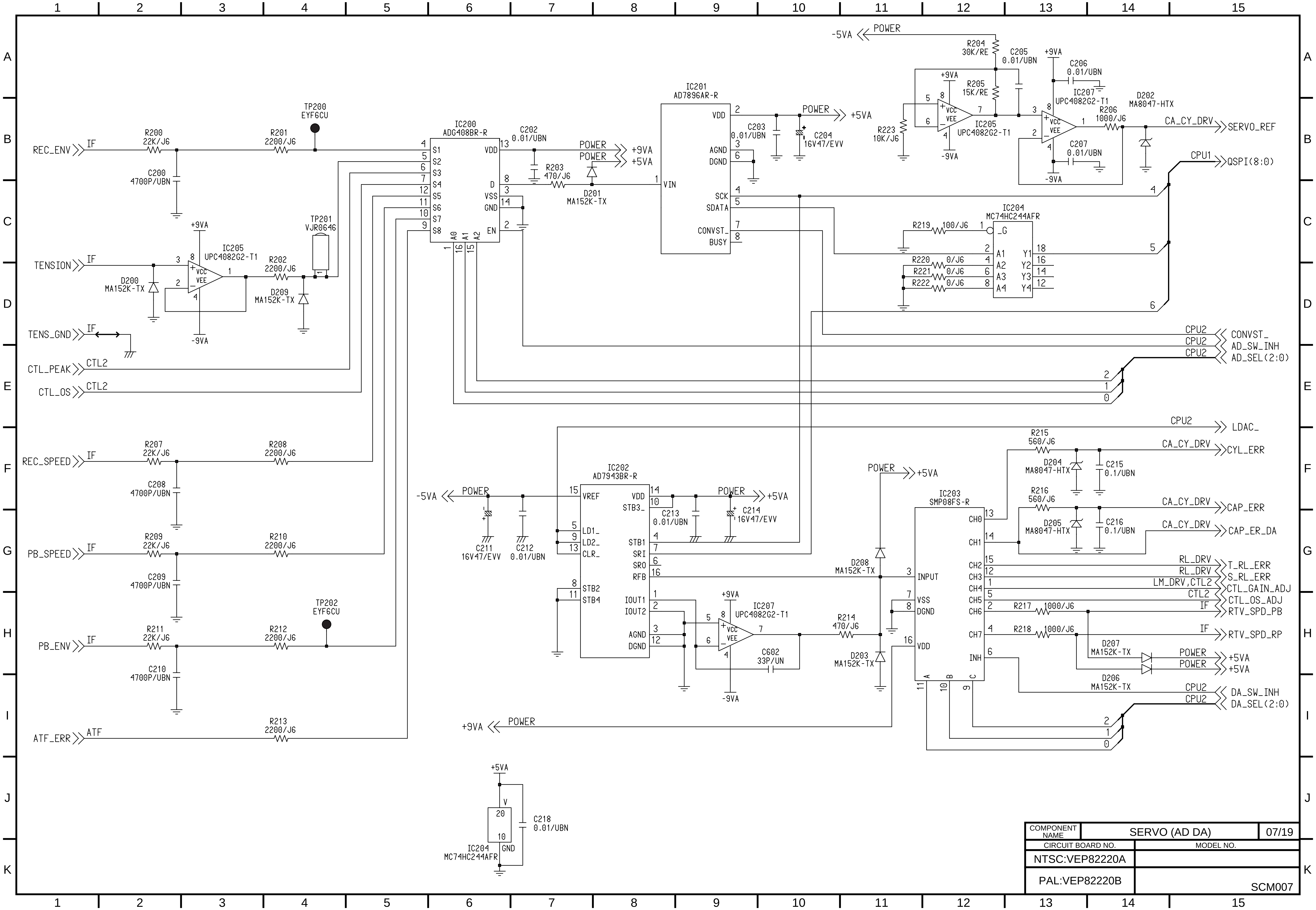
COMPONENT NAME	SERVO (CAP FG)	04/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM004	


+9VA
POWER
RL_VREF
POWER
S_FG1_M
IF
S_FG2_M
IF
RL_FG_DISCHG
CPU4
CPU3
S_RL_FG4(1:0)
R120 2200/J6
R121 2200/J6
C120 1000P/UN
C121 1000P/UN
C126 0.01/UBN
TP120 VJR0646
D120 MA157-TX
R128 10K/J6
QR120 UN2213-TX
C127 25V33/EVV
IC120 UPC4741G2-T1
R122 22K/RE
R123 22K/RE
C123 0.01/UBN
R124 10K/J6
R125 470K/J6
C124 10P/UN
C128 25V33/EVV
QR121 UN2113-TX
D121 MA157-TX
R129 10K/J6
R130 220K/RE
R131 220K/RE
C129 0.01/UBN
R134 10K/J6
R135 220K/J6
R136 5600/J6
R137 27K/J6
R138 33K/J6
IC160 NJM2901M-T1
IC83 MC74HC4050FR
TP121 VJR0646
IC121 UPC4741G2-T1
R126 10K/J6
R127 470K/J6
C125 10P/UN
R132 150K/J6
R133 150K/J6
R139 2200/J6
R140 2200/J6
C131 1000P/UN
C132 1000P/UN
C130 0.01/UBN
TP122 VJR0646
D122 MA157-TX
R141 10K/J6
QR122 UN2213-TX
C133 25V33/EVV
R143 220K/RE
R144 220K/RE
C135 0.01/UBN
C134 25V33/EVV
QR123 UN2113-TX
QR124 UN2213-TX
D123 MA157-TX
R142 10K/J6
R145 10K/J6
R146 220K/J6
R147 5600/J6
R148 27K/J6
R149 33K/J6
TP123 VJR0646
VCC
VEE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

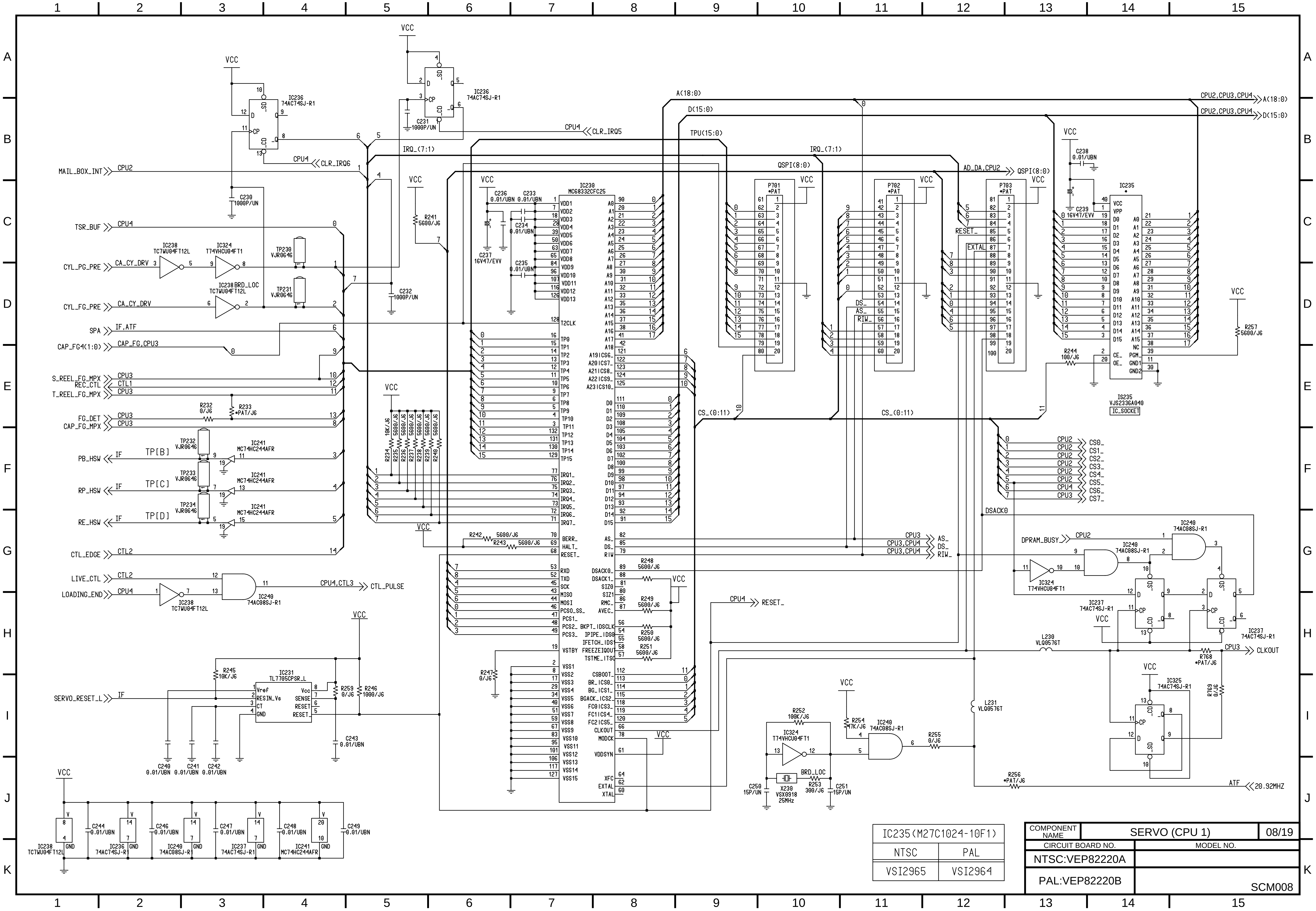
COMPONENT NAME	SERVO (S FG)	05/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM005	


+9VA
POWER
RL_VREF
POWER
T_FG1_M
IF
T_FG2_M
IF
RL_FG_DISCHG
CPU4
CPU3
T_RL_FG4(1:0)
R160 2200/J6
R161 2200/J6
C160 1000P/UN
C161 1000P/UN
C165 0.01/UBN
D160 MA157-TX
R168 10K/J6
QR160 UN2213-TX
C166 25V33/EVV
IC161 UPC4741G2-T1
R162 22K/RE
R163 22K/RE
C162 0.01/UBN
R164 10K/J6
R165 470K/J6
C163 10P/UN
C167 25V33/EVV
QR161 UN2113-TX
D161 MA157-TX
R169 10K/J6
R170 220K/RE
R171 220K/RE
C168 0.01/UBN
TP160 VJR0646
C169 0.01/UBN
IC160 NJM2901M-T1
R172 10K/J6
R173 220K/J6
R174 5600/J6
R175 27K/J6
R176 33K/J6
IC82 NJM2901M-T1
IC83 MC74HC4050FR
TP161 VJR0646
IC162 UPC4741G2-T1
R166 10K/J6
R167 470K/J6
C164 10P/UN
R177 150K/J6
R178 150K/J6
TP162 VJR0646
R179 2200/J6
R180 2200/J6
C170 1000P/UN
C171 1000P/UN
C172 0.01/UBN
D162 MA157-TX
R181 10K/J6
QR162 UN2213-TX
C173 25V33/EVV
C174 25V33/EVV
QR163 UN2113-TX
D163 MA157-TX
R182 10K/J6
QR164 UN2213-TX
R183 220K/RE
R184 220K/RE
C175 0.01/UBN
R185 10K/J6
R186 220K/J6
R187 5600/J6
R188 27K/J6
R189 33K/J6
TP163 VJR0646
VCC
VEE
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	SERVO (T FG)	06/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM006	

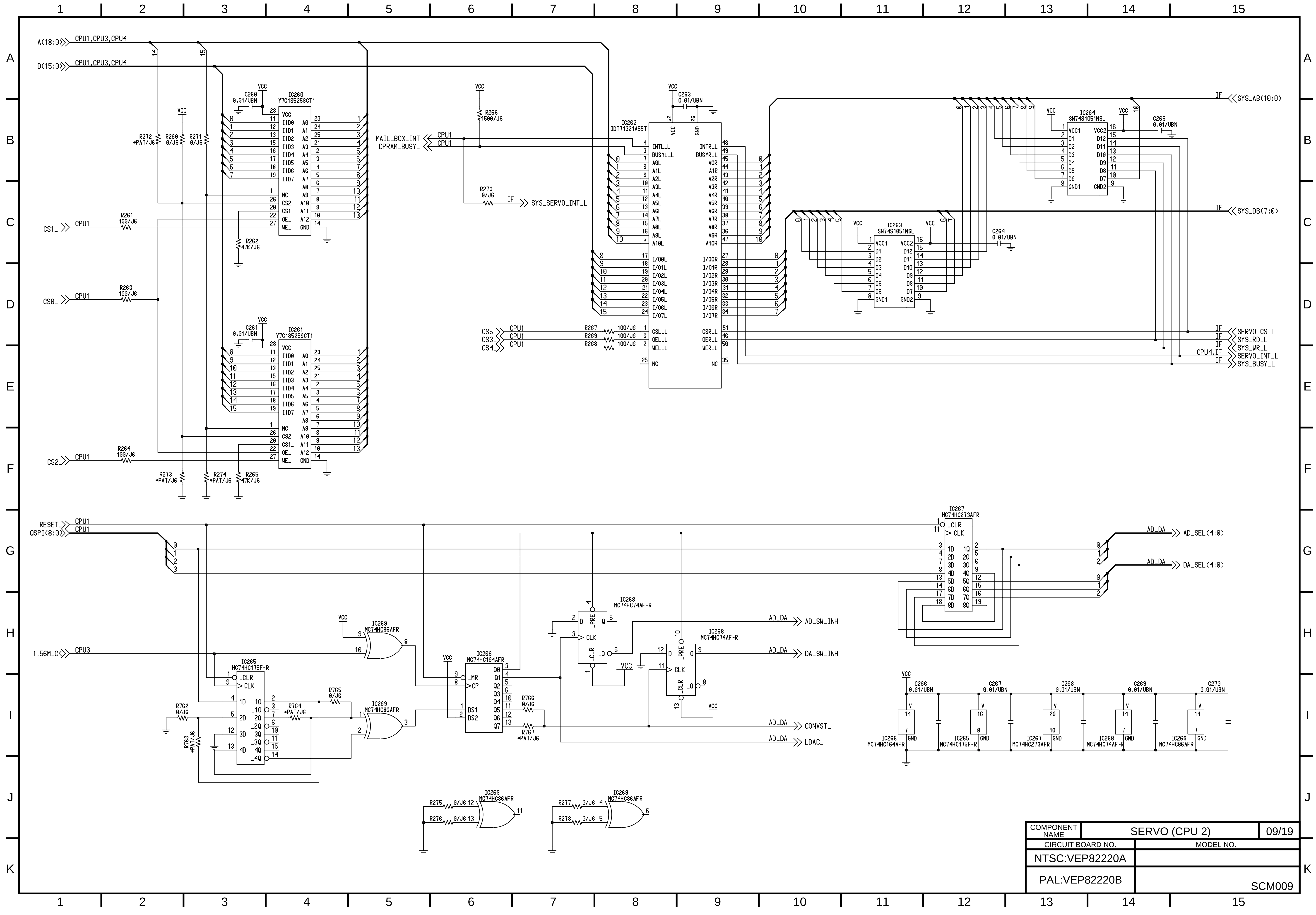

REC_ENV
IF
R200
22K/J6
C200
4700P/UBN
R201
2200/J6
TP200
EYF6CU
IC200
ADG408BR-R
S1
S2
S3
S4
S5
S6
S7
S8
VDD
D
VSS
GND
EN
A0
A1
A2
C202
0.01/UBN
POWER
+9VA
+5VA
R203
470/J6
D201
MA152K-TX
IC201
AD7896AR-R
VDD
VIN
AGND
DGND
SCK
SDATA
CONVST_
BUSY
C203
0.01/UBN
C204
16V47/EVV
-5VA
R204
30K/RE
C205
0.01/UBN
R205
15K/RE
IC205
UPC4082G2-T1
R223
10K/J6
C206
0.01/UBN
IC207
UPC4082G2-T1
R206
1000/J6
D202
MA8047-HTX
C207
0.01/UBN
-9VA
CA_CY_DRV
SERVO_REF
CPU1
QSPI(8:0)
TENSION
D200
MA152K-TX
R202
2200/J6
D209
MA152K-TX
TP201
VJR0646
IC204
MC74HC244AFR
R219
100/J6
R220
0/J6
R221
0/J6
R222
0/J6
_G
A1
A2
A3
A4
Y1
Y2
Y3
Y4
TENS_GND
CTL_PEAK
CTL2
CTL_OS
CPU2
CONVST_
AD_SW_INH
AD_SEL(2:0)
LDAC_
REC_SPEED
R207
22K/J6
R208
2200/J6
C208
4700P/UBN
IC202
AD7943BR-R
VREF
LD1_
LD2_
CLR_
STB2
STB4
STB3_
STB1
SRI
SRO
RFB
IOUT1
IOUT2
AGND
DGND
C211
16V47/EVV
C212
0.01/UBN
C213
0.01/UBN
C214
16V47/EVV
PB_SPEED
R209
22K/J6
R210
2200/J6
C209
4700P/UBN
PB_ENV
R211
22K/J6
R212
2200/J6
C210
4700P/UBN
TP202
EYF6CU
ATF_ERR
ATF
R213
2200/J6
C602
33P/UN
R214
470/J6
D208
MA152K-TX
D203
MA152K-TX
IC203
SMP08FS-R
CH0
CH1
CH2
CH3
CH4
CH5
CH6
CH7
INH
INPUT
VSS
DGND
VDD
R215
560/J6
D204
MA8047-HTX
C215
0.1/UBN
CYL_ERR
R216
560/J6
D205
MA8047-HTX
C216
0.1/UBN
CAP_ERR
CAP_ER_DA
RL_DRV
T_RL_ERR
S_RL_ERR
LM_DRV,CTL2
CTL_GAIN_ADJ
CTL_OS_ADJ
R217
1000/J6
RTV_SPD_PB
R218
1000/J6
RTV_SPD_RP
D207
MA152K-TX
D206
MA152K-TX
DA_SW_INH
DA_SEL(2:0)
C218
0.01/UBN
IC204
MC74HC244AFR
GND

COMPONENT NAME	SERVO (AD DA)	07/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B		SCM007


MAIL_BOX_INT
TSR_BUF
CYL_PG_PRE
CYL_FG_PRE
SPA
CAP_FG4(1:0)
S_REEL_FG_MPX
REC_CTL
T_REEL_FG_MPX
FG_DET
CAP_FG_MPX
PB_HSW
RP_HSW
RE_HSW
CTL_EDGE
LIVE_CTL
LOADING_END
SERVO_RESET_L
CPU2
CPU4
CA_CY_DRV
IF,ATF
CAP_FG,CPU3
CPU3
CTL1
CTL2
IF
TP[B]
TP[C]
TP[D]
IC236 74AC74SJ-R1
IC238 TC7WU04FT12L
IC324 T74VHCU04FT1
IC241 MC74HC244AFR
IC240 74AC08SJ-R1
IC237 74AC74SJ-R1
IC231 TL7705CPSR_L
IC230 MC68332CFC25
IC235
IC325 74AC74SJ-R1
P701 *PAT
P702 *PAT
P703 *PAT
CLR_IRQ5
CLR_IRQ6
CPU4,CTL3
CTL_PULSE
A(18:0)
D(15:0)
TPU(15:0)
IRQ_(7:1)
QSPI(8:0)
AD_DA,CPU2
CPU2,CPU3,CPU4
CS_(0:11)
CS0_
CS1_
CS2_
CS3_
CS4_
CS5_
CS6_
CS7_
DSACK0
DPRAM_BUSY
AS_
DS_
R/W_
RESET_
EXTAL
CLKOUT
ATF
20.92MHZ
X230 VSX0918 25MHz
BRD_LOC
L230 VLQ0576T
L231 VLQ0576T
IS235 VJS2336A040 IC_SOCKET
VCC

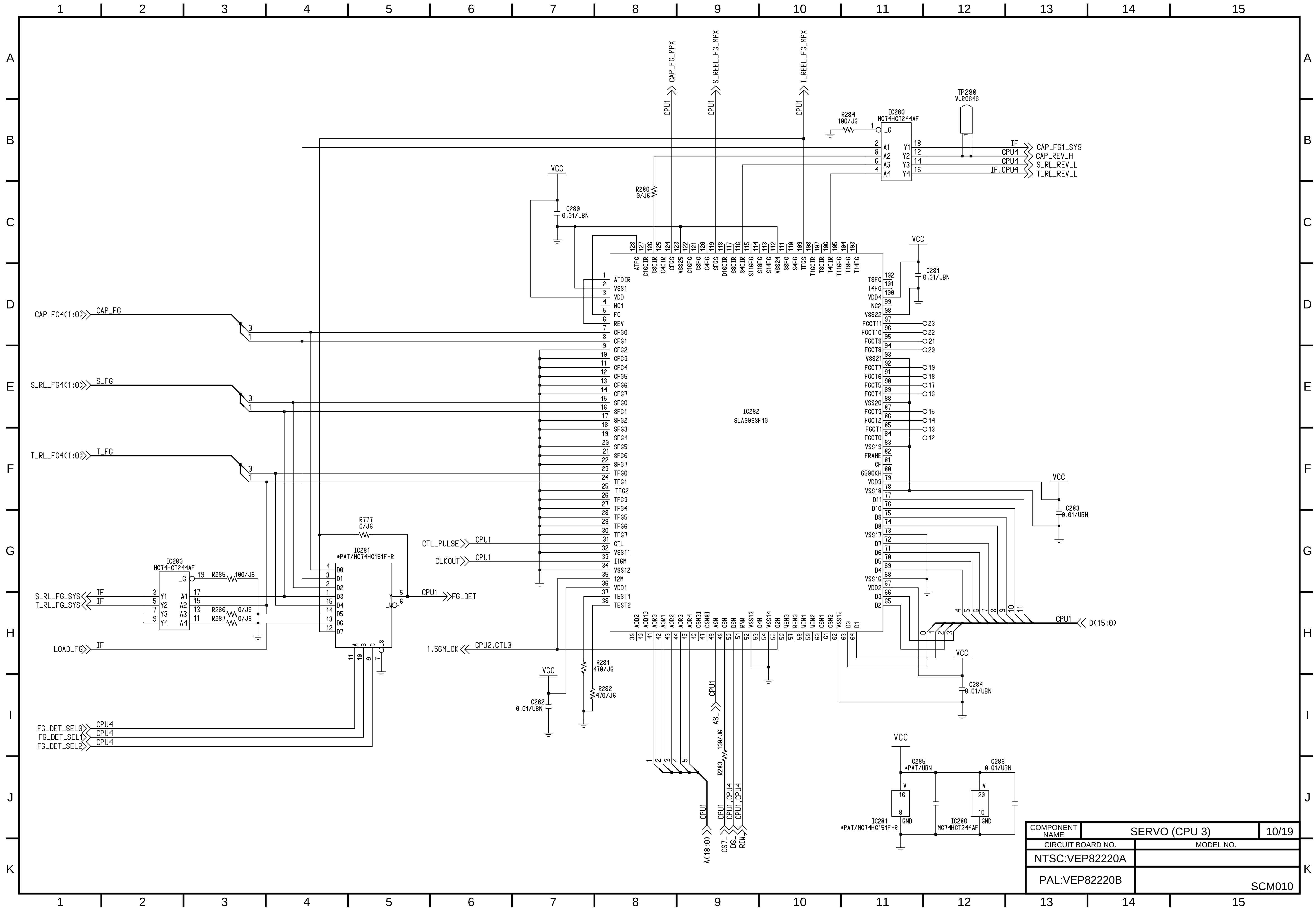
IC235(M27C1024-10F1)	
NTSC	PAL
VSI2965	VSI2964

COMPONENT NAME	SERVO (CPU 1)	08/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM008	

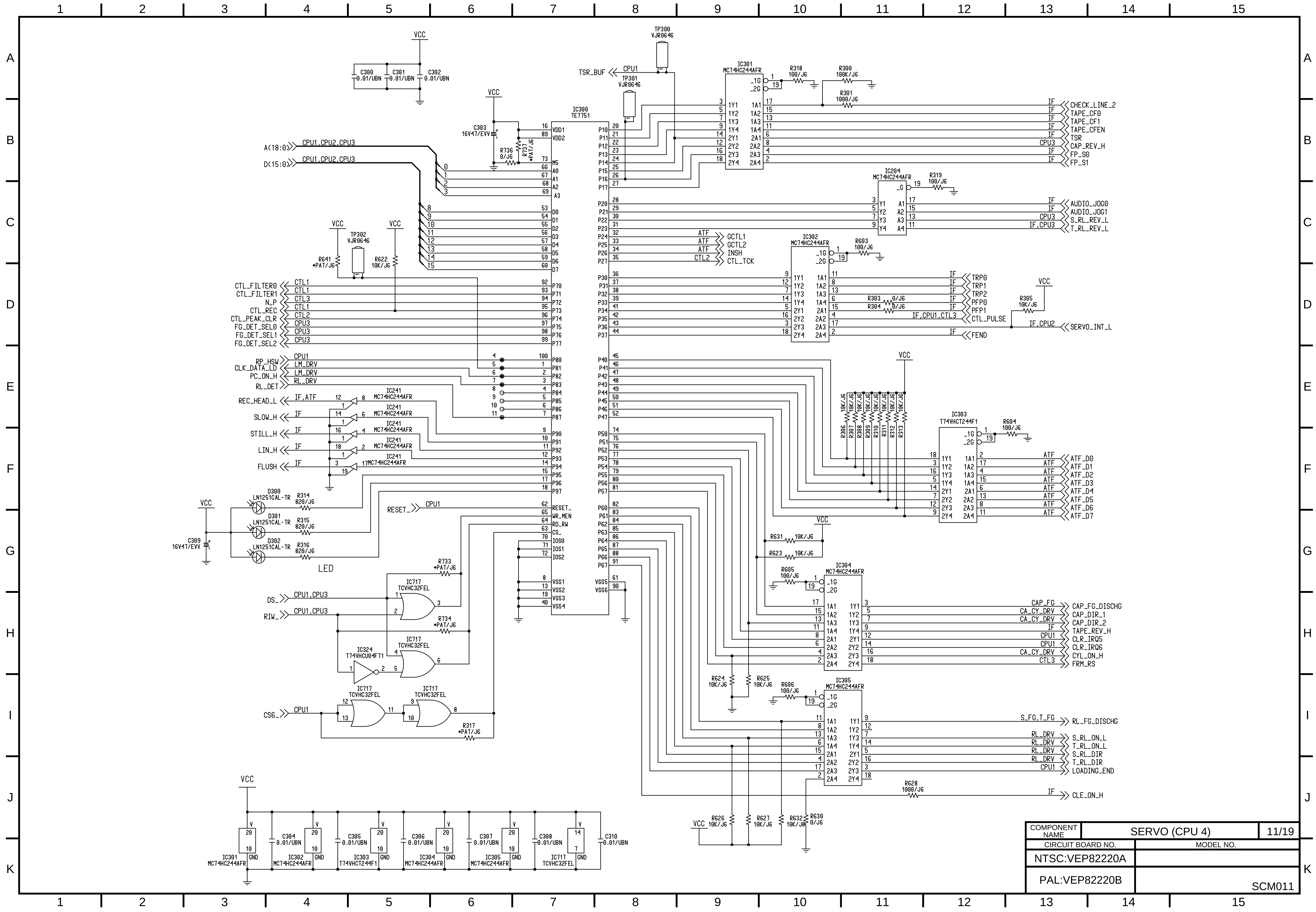


A(18:0) CPU1,CPU3,CPU4
D(15:0) CPU1,CPU3,CPU4
IC260 Y7C18525SCT1
C260 0.01/UBN
IC261 Y7C18525SCT1
C261 0.01/UBN
R272 *PAT/J6
R269 0/J6
R271 0/J6
R261 100/J6
R262 47K/J6
R263 100/J6
R264 100/J6
R273 *PAT/J6
R274 *PAT/J6
R265 47K/J6
CS1_ CPU1
CS0_ CPU1
CS2_ CPU1
VCC
GND
R266 1500/J6
MAIL_BOX_INT CPU1
DPRAM_BUSY_ CPU1
R270 0/J6
IF SYS_SERVO_INT_L
IC262 IDT71321A55T
C263 0.01/UBN
CS5_ CPU1 R267 100/J6
CS3_ CPU1 R269 100/J6
CS4_ CPU1 R268 100/J6
INTL_L BUSYL_L A0L A1L A2L A3L A4L A5L A6L A7L A8L A9L A10L
I/O0L I/O1L I/O2L I/O3L I/O4L I/O5L I/O6L I/O7L
CSL_L OEL_L WEL_L NC
INTR_L BUSYR_L A0R A1R A2R A3R A4R A5R A6R A7R A8R A9R A10R
I/O0R I/O1R I/O2R I/O3R I/O4R I/O5R I/O6R I/O7R
CSR_L OER_L WER_L NC
IF SYS_AB(10:0)
IC264 SN74S1051NSL
C265 0.01/UBN
IF SYS_DB(7:0)
IC263 SN74S1051NSL
C264 0.01/UBN
IF SERVO_CS_L
IF SYS_RD_L
IF SYS_WR_L
CPU4,IF SERVO_INT_L
IF SYS_BUSY_L
RESET_ CPU1
QSPI(8:0) CPU1
IC267 MC74HC273AFR
AD_DA AD_SEL(4:0)
AD_DA DA_SEL(4:0)
IC268 MC74HC74AF-R
AD_DA AD_SW_INH
AD_DA DA_SW_INH
IC269 MC74HC86AFR
1.56M_CK CPU3
IC265 MC74HC175F-R
IC266 MC74HC164AFR
R762 0/J6
R763 *PAT/J6
R764 *PAT/J6
R765 0/J6
R766 0/J6
R767 *PAT/J6
AD_DA CONVST_
AD_DA LDAC_
C266 0.01/UBN
C267 0.01/UBN
C268 0.01/UBN
C269 0.01/UBN
C270 0.01/UBN
IC266 MC74HC164AFR
IC265 MC74HC175F-R
IC267 MC74HC273AFR
IC268 MC74HC74AF-R
IC269 MC74HC86AFR
R275 0/J6
R276 0/J6
R277 0/J6
R278 0/J6

COMPONENT NAME	SERVO (CPU 2)	09/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM009	


IC282
SLA909SF1G
IC280
MC74HCT244AF
IC281
•PAT/MC74HC151F-R
TP280
VJR0646
R284
100/J6
R280
0/J6
C280
0.01/UBN
C281
0.01/UBN
C283
0.01/UBN
C284
0.01/UBN
C282
0.01/UBN
C285
•PAT/UBN
C286
0.01/UBN
R777
0/J6
R285
100/J6
R286
0/J6
R287
0/J6
R281
470/J6
R282
470/J6
R283
100/J6
VCC
CPU1
CAP_FG_MPX
S_REEL_FG_MPX
T_REEL_FG_MPX
IF
CAP_FG1_SYS
CPU4
CAP_REV_H
S_RL_REV_L
IF,CPU4
T_RL_REV_L
CAP_FG4(1:0)
CAP_FG
S_RL_FG4(1:0)
S_FG
T_RL_FG4(1:0)
T_FG
S_RL_FG_SYS
T_RL_FG_SYS
LOAD_FG
FG_DET_SEL0
FG_DET_SEL1
FG_DET_SEL2
CTL_PULSE
CLKOUT
FG_DET
1.56M_CK
CPU2,CTL3
D(15:0)
A(18:0)
AS_
CS7_
DS_
R/W
CPU1,CPU4
ATDIR
VSS1
VDD
NC1
FG
REV
CFG0
CFG1
CFG2
CFG3
CFG4
CFG5
CFG6
CFG7
SFG0
SFG1
SFG2
SFG3
SFG4
SFG5
SFG6
SFG7
TFG0
TFG1
TFG2
TFG3
TFG4
TFG5
TFG6
TFG7
CTL
VSS11
I16M
VSS12
12M
VDD1
TEST1
TEST2
ATFG
C160IR
C80IR
C40IR
CFGS
VSS25
C16FG
C8FG
C4FG
SFGS
D160IR
S80IR
S40IR
S116FG
S18FG
S14FG
VSS24
S8FG
S4FG
TFGS
T160IR
T80IR
T40IR
T116FG
T18FG
T14FG
T8FG
T4FG
VDD4
NC2
VSS22
FGCT11
FGCT10
FGCT9
FGCT8
VSS21
FGCT7
FGCT6
FGCT5
FGCT4
VSS20
FGCT3
FGCT2
FGCT1
FGCT0
VSS19
FRAME
CF
G500KH
VDD3
VSS18
D11
D10
D9
D8
VSS17
D7
D6
D5
D4
VSS16
VDD2
D3
D2
AD2
AD10
ADR0
ADR1
ADR2
ADR3
ADR4
CSN3I
CSN8I
ASN
CSN
DSN
RNW
VSS13
VSS14
O4M
O2M
WEN0
REN0
WEN1
REN1
WEN2
CSN1
CSN2
VSS15
D0
D1
_G
A1
A2
A3
A4
Y1
Y2
Y3
Y4
D0
D1
D2
D3
D4
D5
D6
D7
A
B
C
_S
V
GND

COMPONENT NAME	SERVO (CPU 3)	10/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM010	


1
2
3
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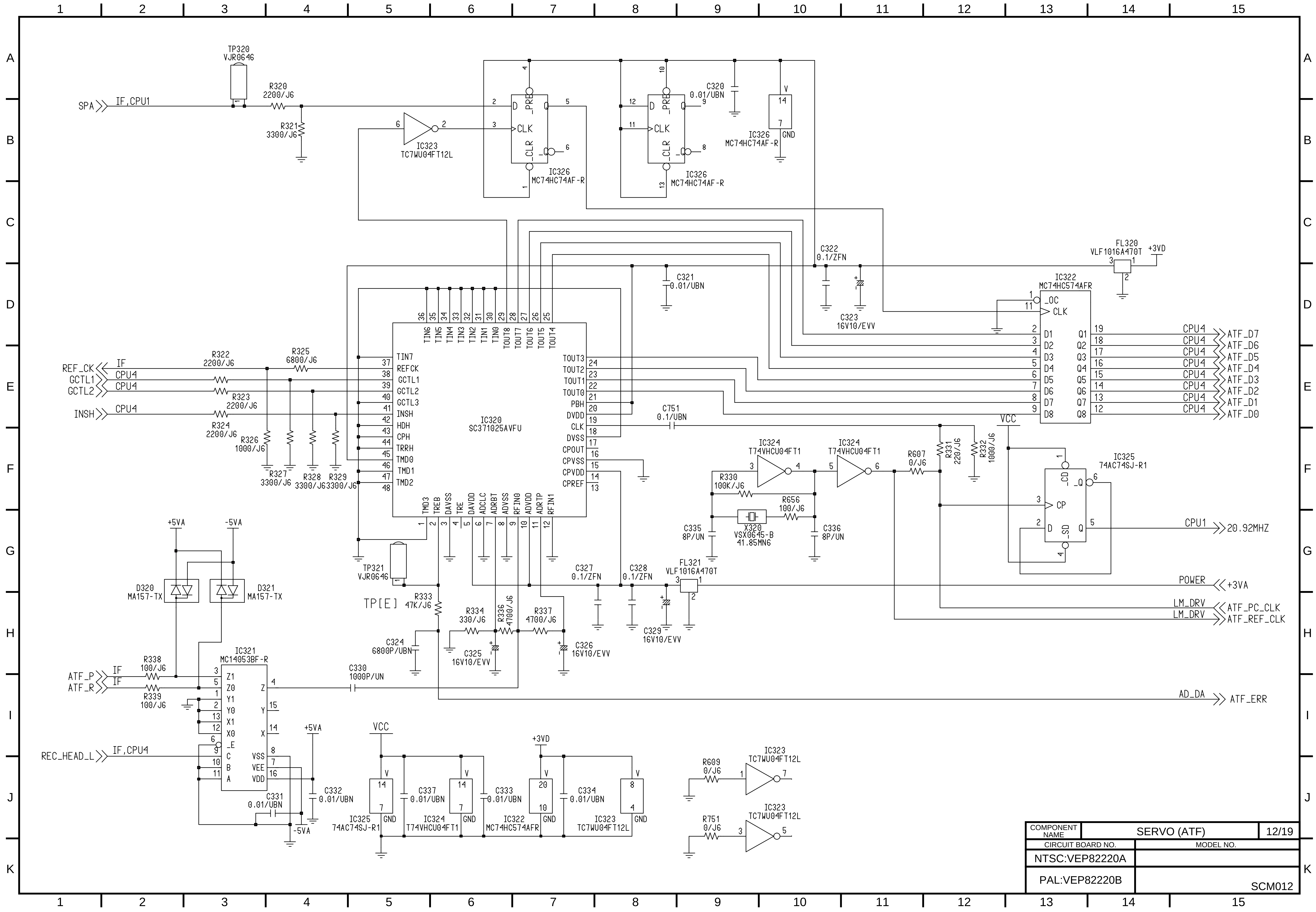
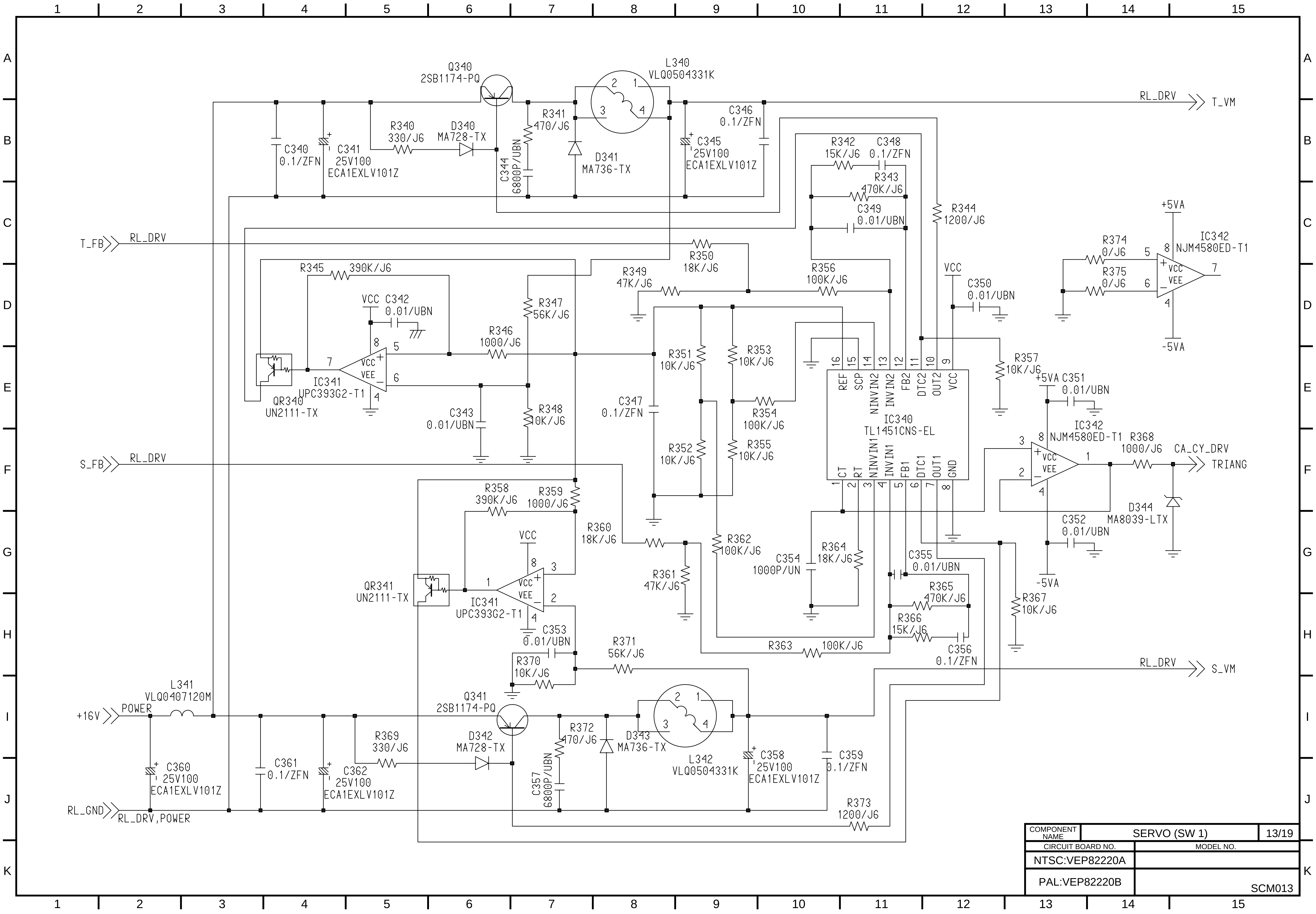
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
VCC
C300
0.01/UBN
C301
0.01/UBN
C302
0.01/UBN
C303
16V47/EVV
R736
0/J6
R737
*PAT/J6
IC300
TE7751
VDD1
VDD2
M5
A0
A1
A2
A3
D0
D1
D2
D3
D4
D5
D6
D7
P10
P11
P12
P13
P14
P15
P16
P17
P20
P21
P22
P23
P24
P25
P26
P27
P30
P31
P32
P33
P34
P35
P36
P37
P40
P41
P42
P43
P44
P45
P46
P47
P50
P51
P52
P53
P54
P55
P56
P57
P60
P61
P62
P63
P64
P65
P66
P67
P70
P71
P72
P73
P74
P75
P76
P77
P80
P81
P82
P83
P84
P85
P86
P87
P90
P91
P92
P93
P94
P95
P96
P97
RESET_
WR_MEN
RD_RW
CS_
IOS0
IOS1
IOS2
VSS1
VSS2
VSS3
VSS4
VSS5
VSS6
A(18:0)
CPU1,CPU2,CPU3
D(15:0)
CPU1,CPU2,CPU3
TSR_BUF
CPU1
TP300
VJR0646
TP301
VJR0646
TP302
VJR0646
R641
*PAT/J6
R622
10K/J6
CTL_FILTER0
CTL1
CTL_FILTER1
CTL1
N_P
CTL3
CTL_REC
CTL1
CTL_PEAK_CLR
CTL2
FG_DET_SEL0
CPU3
FG_DET_SEL1
CPU3
FG_DET_SEL2
CPU3
RP_HSW
CPU1
CLK_DATA_LD
LM_DRV
PC_ON_H
LM_DRV
RL_DET
RL_DRV
REC_HEAD_L
IF,ATF
SLOW_H
IF
STILL_H
IF
LIN_H
IF
FLUSH
IF
IC241
MC74HC244AFR
D300
LN1251CAL-TR
R314
820/J6
D301
LN1251CAL-TR
R315
820/J6
D302
LN1251CAL-TR
R316
820/J6
C309
16V47/EVV
LED
RESET_
CPU1
R733
*PAT/J6
IC717
TCVHC32FEL
DS_
CPU1,CPU3
RIW_
CPU1,CPU3
R734
*PAT/J6
IC324
T74VHCU04FT1
CS6_
CPU1
R317
*PAT/J6
IC301
MC74HC244AFR
R318
100/J6
R300
100K/J6
R301
1000/J6
_1G
_2G
1Y1
1Y2
1Y3
1Y4
2Y1
2Y2
2Y3
2Y4
1A1
1A2
1A3
1A4
2A1
2A2
2A3
2A4
IF
CHECK_LINE_2
IF
TAPE_CF0
IF
TAPE_CF1
IF
TAPE_CFEN
IF
TSR
CPU3
CAP_REV_H
IF
FP_S0
IF
FP_S1
IC204
MC74HC244AFR
R319
100/J6
_G
IF
AUDIO_JOG0
IF
AUDIO_JOG1
CPU3
S_RL_REV_L
IF,CPU3
T_RL_REV_L
ATF
GCTL1
ATF
GCTL2
ATF
INSH
CTL2
CTL_TCK
IC302
MC74HC244AFR
R603
100/J6
IF
TRP0
IF
TRP1
IF
TRP2
R303
0/J6
IF
PFP0
R304
0/J6
IF
PFP1
IF,CPU1,CTL3
CTL_PULSE
R305
10K/J6
IF,CPU2
SERVO_INT_L
IF
FEND
R306
R307
R308
R309
R310
R311
R312
R313
10K/J6
IC303
T74VHCT244F1
R604
100/J6
ATF
ATF_D0
ATF
ATF_D1
ATF
ATF_D2
ATF
ATF_D3
ATF
ATF_D4
ATF
ATF_D5
ATF
ATF_D6
ATF
ATF_D7
R631
10K/J6
R623
10K/J6
R605
100/J6
IC304
MC74HC244AFR
CAP_FG
CAP_FG_DISCHG
CA_CY_DRV
CAP_DIR_1
CA_CY_DRV
CAP_DIR_2
IF
TAPE_REV_H
CPU1
CLR_IRQ5
CPU1
CLR_IRQ6
CA_CY_DRV
CYL_ON_H
CTL3
FRM_RS
R624
10K/J6
R625
10K/J6
R606
100/J6
IC305
MC74HC244AFR
S_FG,T_FG
RL_FG_DISCHG
RL_DRV
S_RL_ON_L
RL_DRV
T_RL_ON_L
RL_DRV
S_RL_DIR
RL_DRV
T_RL_DIR
CPU1
LOADING_END
R628
1000/J6
IF
CLE_ON_H
R626
10K/J6
R627
10K/J6
R632
10K/J6
R630
0/J6
IC301
MC74HC244AFR
C304
0.01/UBN
IC302
MC74HC244AFR
C305
0.01/UBN
IC303
T74VHCT244F1
C306
0.01/UBN
IC304
MC74HC244AFR
C307
0.01/UBN
IC305
MC74HC244AFR
C308
0.01/UBN
IC717
TCVHC32FEL
C310
0.01/UBN
V
GND

COMPONENT NAME	SERVO (CPU 4)	11/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM011	



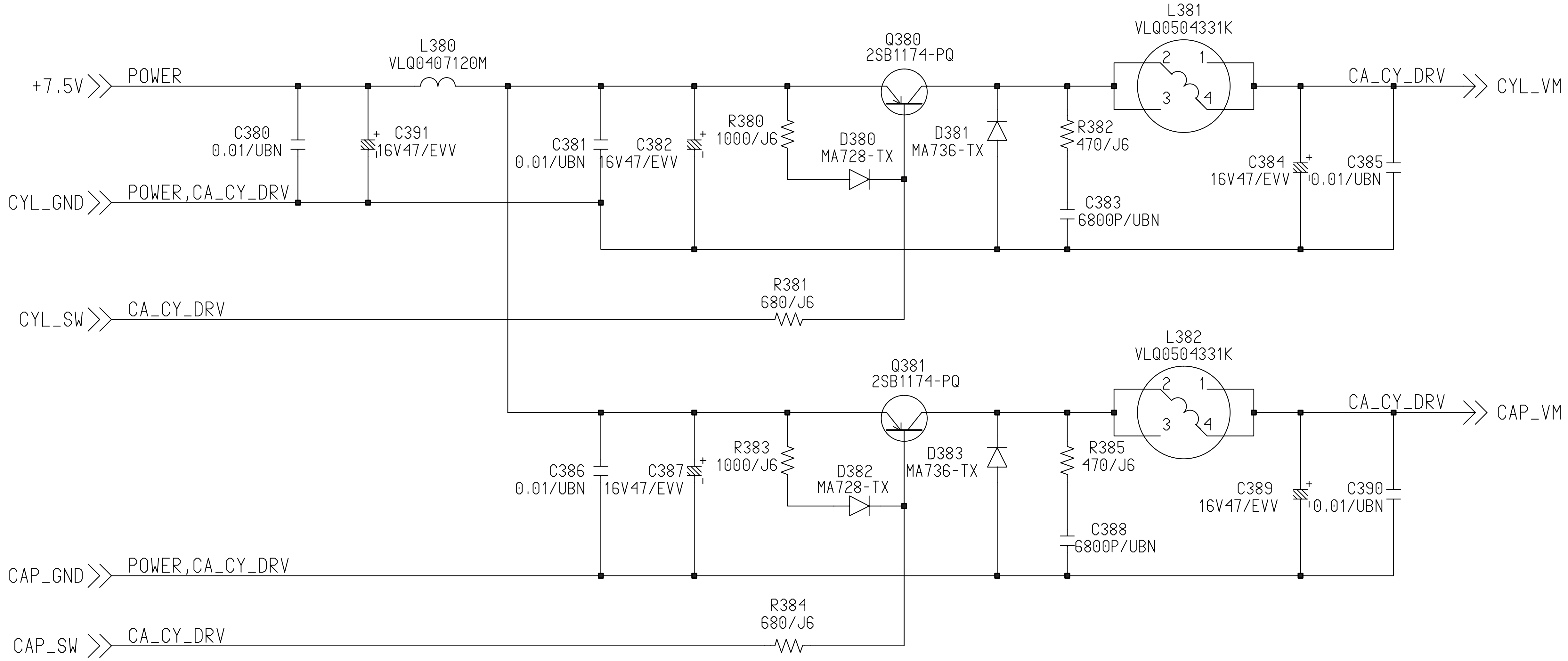
SPA
IF,CPU1
TP320
VJR0646
R320
2200/J6
R321
3300/J6
IC323
TC7WU04FT12L
IC326
MC74HC74AF-R
D
CLK
_PR
_CLR
Q
C320
0.01/UBN
V
GND
C322
0.1/ZFN
C321
0.01/UBN
C323
16V10/EVV
FL320
VLF1016A470T
+3VD
IC322
MC74HC574AFR
_OC
D1
D2
D3
D4
D5
D6
D7
D8
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
CPU4
ATF_D7
ATF_D6
ATF_D5
ATF_D4
ATF_D3
ATF_D2
ATF_D1
ATF_D0
REF_CK
GCTL1
GCTL2
INSH
IF
R322
2200/J6
R325
6800/J6
R323
2200/J6
R324
2200/J6
R326
1000/J6
R327
3300/J6
R328
3300/J6
R329
3300/J6
IC320
SC371025AVFU
TIN7
REFCK
GCTL1
GCTL2
GCTL3
INSH
HDH
CPH
TRRH
TMD0
TMD1
TMD2
TIN6
TIN5
TIN4
TIN3
TIN2
TIN1
TIN0
TOUT8
TOUT7
TOUT6
TOUT5
TOUT4
TOUT3
TOUT2
TOUT1
TOUT0
PBH
DVDD
CLK
DVSS
CPOUT
CPVSS
CPVDD
CPREF
TMD3
TREB
DAVSS
TRE
DAVDD
ADRLC
ADRBT
ADVSS
RFIN0
ADVDD
ADRTP
RFIN1
C751
0.1/UBN
VCC
IC324
T74VHCU04FT1
R330
100K/J6
R656
100/J6
X320
VSX0645-B
41.85MHZ
C335
8P/UN
C336
8P/UN
R607
0/J6
R331
220/J6
R332
1000/J6
IC325
74AC74SJ-R1
_CD
_SD
CP
CPU1
20.92MHZ
POWER
+3VA
LM_DRV
ATF_PC_CLK
ATF_REF_CLK
AD_DA
ATF_ERR
+5VA
-5VA
D320
MA157-TX
D321
MA157-TX
TP321
VJR0646
TP[E]
R333
47K/J6
R334
330/J6
R336
4700/J6
R337
4700/J6
C324
6800P/UBN
C325
16V10/EVV
C326
16V10/EVV
C327
0.1/ZFN
C328
0.1/ZFN
FL321
VLF1016A470T
C329
16V10/EVV
ATF_P
ATF_R
R338
100/J6
R339
100/J6
IC321
MC14053BF-R
Z1
Z0
Y1
Y0
X1
X0
_E
C
B
A
Z
Y
X
VSS
VEE
VDD
C330
1000P/UN
REC_HEAD_L
IF,CPU4
C331
0.01/UBN
C332
0.01/UBN
C337
0.01/UBN
C333
0.01/UBN
C334
0.01/UBN
IC325
74AC74SJ-R1
IC324
T74VHCU04FT1
IC322
MC74HC574AFR
IC323
TC7WU04FT12L
R609
0/J6
R751
0/J6

COMPONENT NAME	SERVO (ATF)	12/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B		SCM012

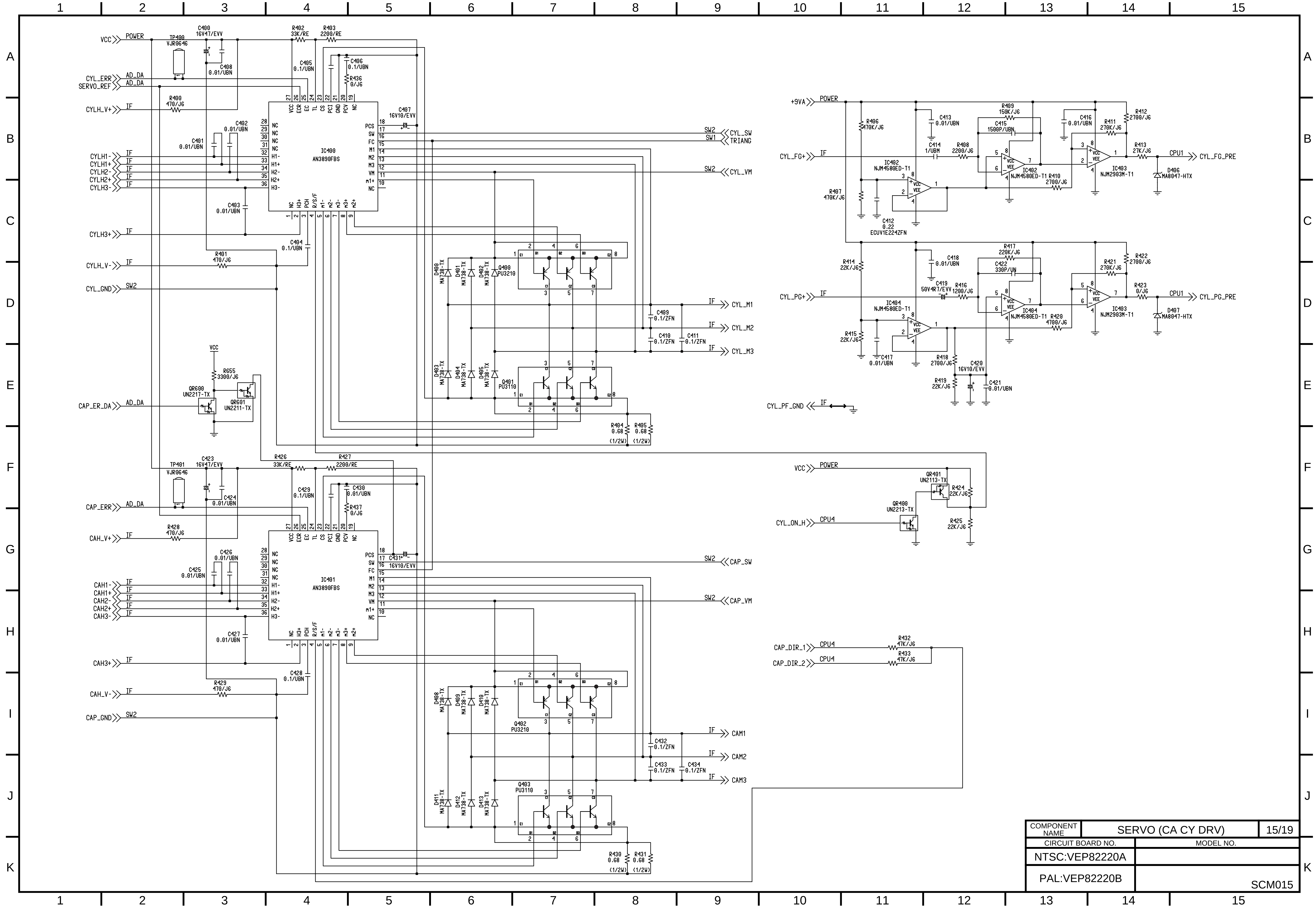


Q340
2SB1174-PQ
L340
VLQ0504331K
RL_DRV
T_VM
R341
470/J6
C346
0.1/ZFN
R340
330/J6
D340
MA728-TX
C340
0.1/ZFN
C341
25V100
ECA1EXLV101Z
C344
6800P/UBN
D341
MA736-TX
C345
25V100
ECA1EXLV101Z
R342
15K/J6
C348
0.1/ZFN
R343
470K/J6
C349
0.01/UBN
R344
1200/J6
+5VA
IC342
NJM4580ED-T1
R374
0/J6
R375
0/J6
-5VA
T_FB
RL_DRV
R350
18K/J6
R345
390K/J6
R349
47K/J6
R356
100K/J6
VCC
C350
0.01/UBN
VCC
C342
0.01/UBN
R347
56K/J6
R346
1000/J6
R351
10K/J6
R353
10K/J6
R357
10K/J6
QR340
UN2111-TX
IC341
UPC393G2-T1
C343
0.01/UBN
R348
10K/J6
C347
0.1/ZFN
R354
100K/J6
IC340
TL1451CNS-EL
REF
SCP
NINVIN2
INVIN2
FB2
DTC2
OUT2
VCC
CT
RT
NINVIN1
INVIN1
FB1
DTC1
OUT1
GND
+5VA
C351
0.01/UBN
IC342
NJM4580ED-T1
R368
1000/J6
CA_CY_DRV
TRIANG
S_FB
RL_DRV
R352
10K/J6
R355
10K/J6
R358
390K/J6
R359
1000/J6
D344
MA8039-LTX
C352
0.01/UBN
R360
18K/J6
R362
100K/J6
C354
1000P/UN
R364
18K/J6
C355
0.01/UBN
VCC
QR341
UN2111-TX
IC341
UPC393G2-T1
R361
47K/J6
R365
470K/J6
R367
10K/J6
-5VA
C353
0.01/UBN
R371
56K/J6
R366
15K/J6
R363
100K/J6
C356
0.1/ZFN
R370
10K/J6
RL_DRV
S_VM
L341
VLQ0407120M
Q341
2SB1174-PQ
+16V
POWER
R369
330/J6
D342
MA728-TX
R372
470/J6
D343
MA736-TX
L342
VLQ0504331K
C358
25V100
ECA1EXLV101Z
C359
0.1/ZFN
C360
25V100
ECA1EXLV101Z
C361
0.1/ZFN
C362
25V100
ECA1EXLV101Z
C357
6800P/UBN
R373
1200/J6
RL_GND
RL_DRV,POWER
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

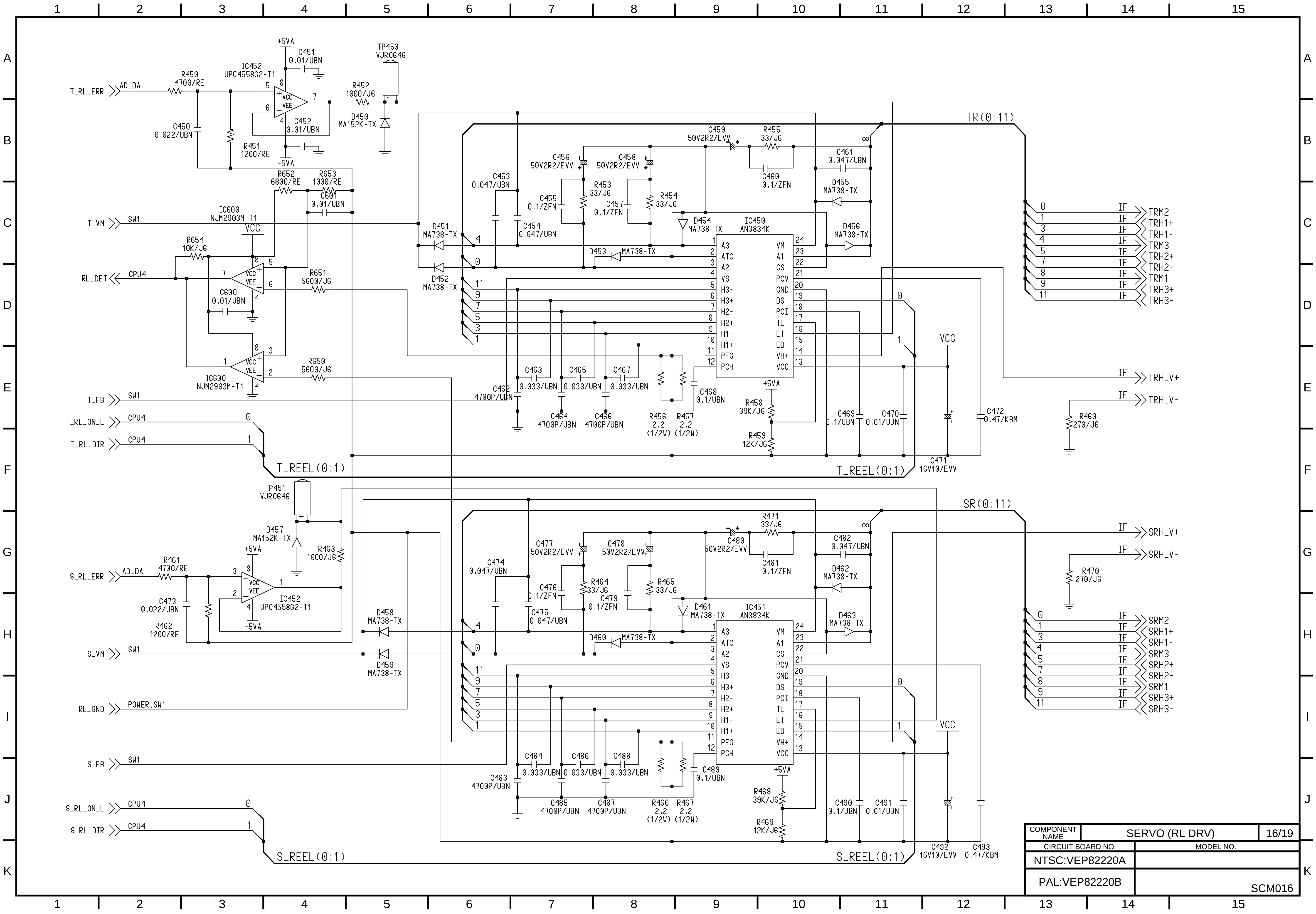
COMPONENT NAME	SERVO (SW 1)	13/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM013	


+7.5V
POWER
L380
VLQ0407120M
Q380
2SB1174-PQ
L381
VLQ0504331K
CA_CY_DRV
CYL_VM
C380
0.01/UBN
C391
16V47/EVV
C381
0.01/UBN
C382
16V47/EVV
R380
1000/J6
D380
MA728-TX
D381
MA736-TX
R382
470/J6
C383
6800P/UBN
C384
16V47/EVV
C385
0.01/UBN
CYL_GND
POWER,CA_CY_DRV
R381
680/J6
CYL_SW
CA_CY_DRV
Q381
2SB1174-PQ
L382
VLQ0504331K
CA_CY_DRV
CAP_VM
C386
0.01/UBN
C387
16V47/EVV
R383
1000/J6
D382
MA728-TX
D383
MA736-TX
R385
470/J6
C388
6800P/UBN
C389
16V47/EVV
C390
0.01/UBN
CAP_GND
POWER,CA_CY_DRV
R384
680/J6
CAP_SW
CA_CY_DRV
1
2
3
4

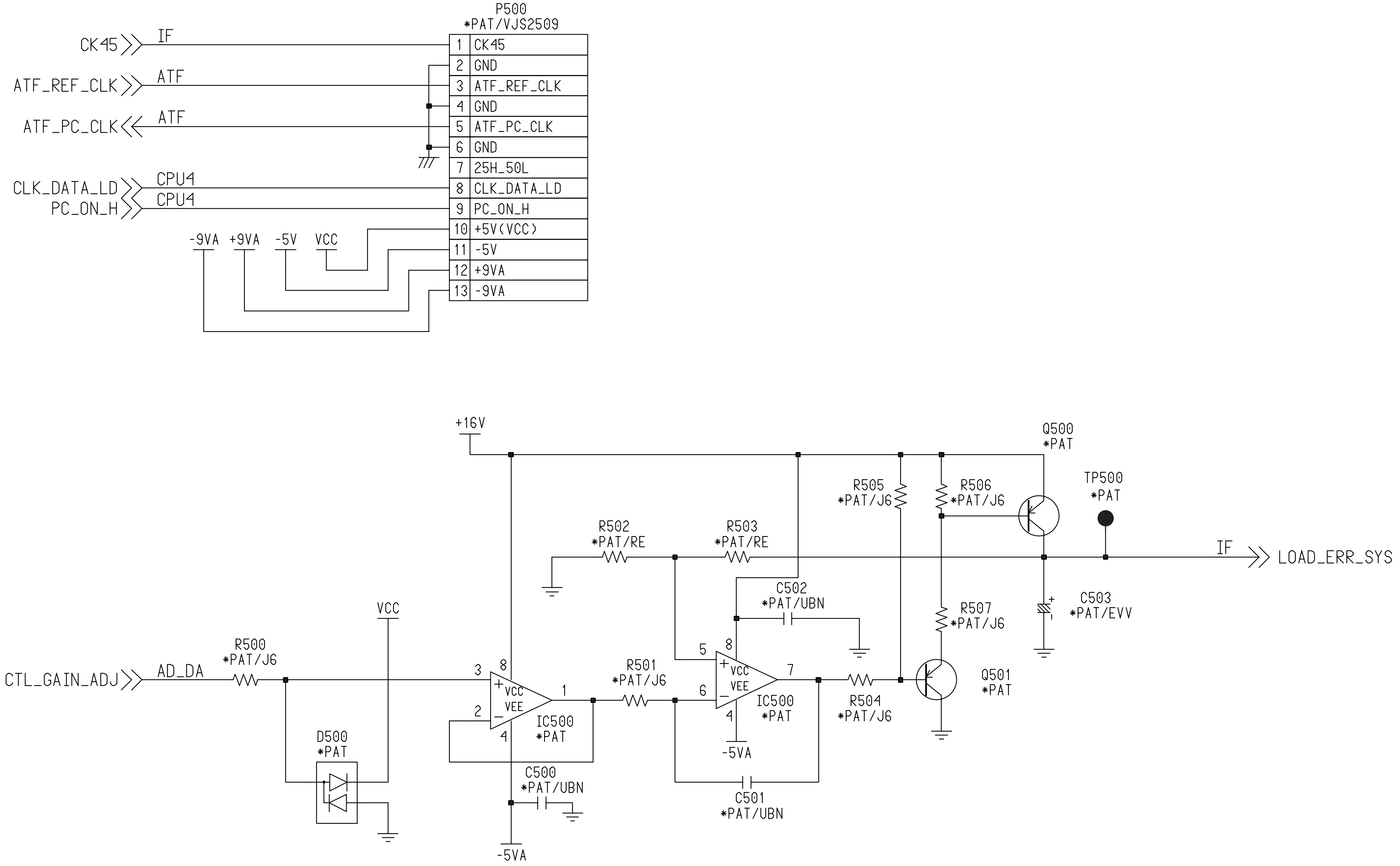
COMPONENT NAME	SERVO (SW 2)	14/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM014	


VCC
POWER
TP400
VJR0646
C400
16V47/EVV
C408
0.01/UBN
R402
33K/RE
R403
2200/RE
C405
0.1/UBN
C406
0.1/UBN
R436
0/J6
CYL_ERR
AD_DA
SERVO_REF
AD_DA
CYLH_V+
IF
R400
470/J6
C407
16V10/EVV
IC400
AN3890FBS
C402
0.01/UBN
C401
0.01/UBN
CYLH1-
CYLH1+
CYLH2-
CYLH2+
CYLH3-
C403
0.01/UBN
CYLH3+
C404
0.1/UBN
R401
470/J6
CYLH_V-
CYL_GND
SW2
SW2
CYL_SW
SW1
TRIANG
SW2
CYL_VM
D400
D401
D402
MA738-TX
Q400
PU3210
C409
0.1/ZFN
C410
0.1/ZFN
C411
0.1/ZFN
CYL_M1
CYL_M2
CYL_M3
D403
D404
D405
Q401
PU3110
R404
0.68
R405
0.68
(1/2W)
VCC
R655
3300/J6
QR600
UN2217-TX
QR601
UN2211-TX
CAP_ER_DA
AD_DA
TP401
VJR0646
C423
16V47/EVV
C424
0.01/UBN
R426
33K/RE
R427
2200/RE
C429
0.1/UBN
C430
0.01/UBN
R437
0/J6
CAP_ERR
CAH_V+
R428
470/J6
IC401
AN3890FBS
C431
16V10/EVV
C426
0.01/UBN
C425
0.01/UBN
CAH1-
CAH1+
CAH2-
CAH2+
CAH3-
C427
0.01/UBN
CAH3+
C428
0.1/UBN
R429
470/J6
CAH_V-
CAP_GND
CAP_SW
CAP_VM
D408
D409
D410
Q402
PU3210
C432
0.1/ZFN
C433
0.1/ZFN
C434
0.1/ZFN
CAM1
CAM2
CAM3
D411
D412
D413
Q403
PU3110
R430
0.68
R431
0.68
+9VA
POWER
R406
470K/J6
C413
0.01/UBN
R409
150K/J6
C415
1500P/UBN
C416
0.01/UBN
R412
2700/J6
R411
270K/J6
CYL_FG+
C414
1/UBM
R408
2200/J6
IC402
NJM4580ED-T1
IC403
NJM2903M-T1
R413
27K/J6
CPU1
CYL_FG_PRE
R410
2700/J6
D406
MA8047-HTX
R407
470K/J6
C412
0.22
ECUV1E224ZFN
R414
22K/J6
C418
0.01/UBN
R417
220K/J6
C422
330P/UN
R421
270K/J6
R422
2700/J6
CYL_PG+
C419
50V4R7/EVV
R416
1200/J6
IC404
NJM4580ED-T1
R423
0/J6
CYL_PG_PRE
R420
4700/J6
D407
MA8047-HTX
R415
22K/J6
C417
0.01/UBN
R418
2700/J6
C420
16V10/EVV
R419
22K/J6
C421
0.01/UBN
CYL_PF_GND
VCC
POWER
QR401
UN2113-TX
R424
22K/J6
QR400
UN2213-TX
CYL_ON_H
CPU4
R425
22K/J6
CAP_DIR_1
CPU4
R432
47K/J6
CAP_DIR_2
R433
47K/J6

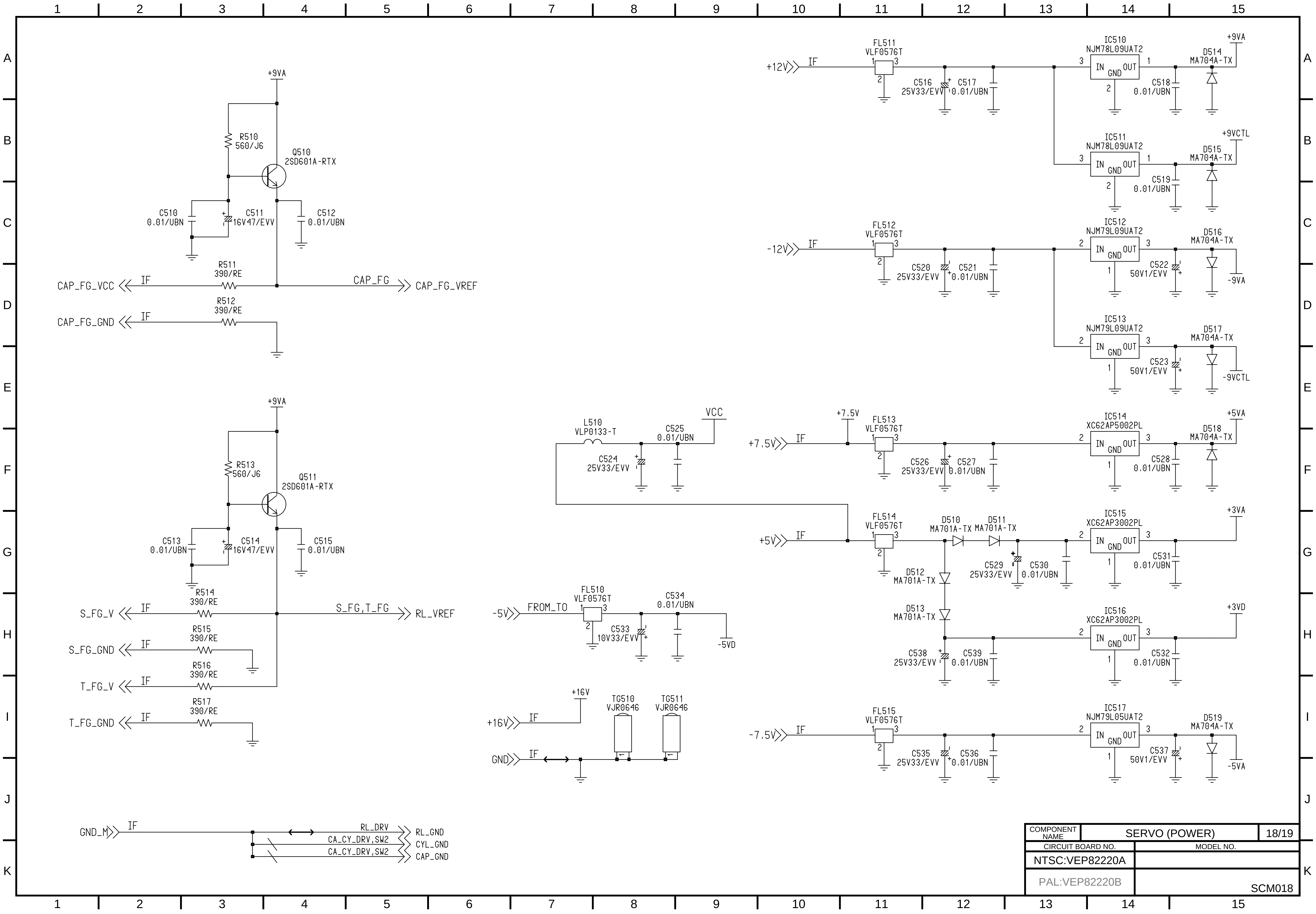
COMPONENT NAME	SERVO (CA CY DRV)	15/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B		SCM015


T_RL_ERR
AD_DA
R450
4700/RE
C450
0.022/UBN
R451
1200/RE
IC452
UPC4558G2-T1
+5VA
C451
0.01/UBN
C452
0.01/UBN
-5VA
TP450
VJR0646
R452
1000/J6
D450
MA152K-TX
R652
6800/RE
R653
1000/RE
C601
0.01/UBN
T_VM
SW1
IC600
NJM2903M-T1
VCC
R654
10K/J6
RL_DET
CPU4
C600
0.01/UBN
R651
5600/J6
R650
5600/J6
IC600
NJM2903M-T1
T_FB
SW1
T_RL_ON_L
CPU4
T_RL_DIR
CPU4
T_REEL(0:1)
TR(0:11)
C453
0.047/UBN
C454
0.047/UBN
D451
MA738-TX
D452
MA738-TX
C456
50V2R2/EVV
C455
0.1/ZFN
R453
33/J6
C458
50V2R2/EVV
C457
0.1/ZFN
R454
33/J6
C459
50V2R2/EVV
R455
33/J6
C460
0.1/ZFN
C461
0.047/UBN
D455
MA738-TX
D456
MA738-TX
D454
MA738-TX
D453
MA738-TX
IC450
AN3834K
A3
ATC
A2
VS
H3-
H3+
H2-
H2+
H1-
H1+
PFG
PCH
VM
A1
CS
PCV
GND
DS
PCI
TL
ET
ED
VH+
VCC
C462
4700P/UBN
C463
0.033/UBN
C464
4700P/UBN
C465
0.033/UBN
C466
4700P/UBN
C467
0.033/UBN
R456
2.2
(1/2W)
R457
2.2
(1/2W)
C468
0.1/UBN
+5VA
R458
39K/J6
R459
12K/J6
C469
0.1/UBN
C470
0.01/UBN
C471
16V10/EVV
C472
0.47/KBM
VCC
IF
TRM2
TRH1+
TRH1-
TRM3
TRH2+
TRH2-
TRM1
TRH3+
TRH3-
TRH_V+
TRH_V-
R460
270/J6
T_REEL(0:1)
TP451
VJR0646
D457
MA152K-TX
R463
1000/J6
S_RL_ERR
AD_DA
R461
4700/RE
C473
0.022/UBN
R462
1200/RE
IC452
UPC4558G2-T1
+5VA
-5VA
S_VM
SW1
D458
MA738-TX
D459
MA738-TX
RL_GND
POWER,SW1
S_FB
SW1
S_RL_ON_L
CPU4
S_RL_DIR
CPU4
S_REEL(0:1)
SR(0:11)
C474
0.047/UBN
C475
0.047/UBN
C477
50V2R2/EVV
C476
0.1/ZFN
R464
33/J6
C478
50V2R2/EVV
C479
0.1/ZFN
R465
33/J6
C480
50V2R2/EVV
R471
33/J6
C481
0.1/ZFN
C482
0.047/UBN
D462
MA738-TX
D463
MA738-TX
D461
MA738-TX
D460
MA738-TX
IC451
AN3834K
C483
4700P/UBN
C484
0.033/UBN
C485
4700P/UBN
C486
0.033/UBN
C487
4700P/UBN
C488
0.033/UBN
R466
2.2
(1/2W)
R467
2.2
(1/2W)
C489
0.1/UBN
+5VA
R468
39K/J6
R469
12K/J6
C490
0.1/UBN
C491
0.01/UBN
C492
16V10/EVV
C493
0.47/KBM
VCC
SRH_V+
SRH_V-
R470
270/J6
SRM2
SRH1+
SRH1-
SRM3
SRH2+
SRH2-
SRM1
SRH3+
SRH3-
S_REEL(0:1)

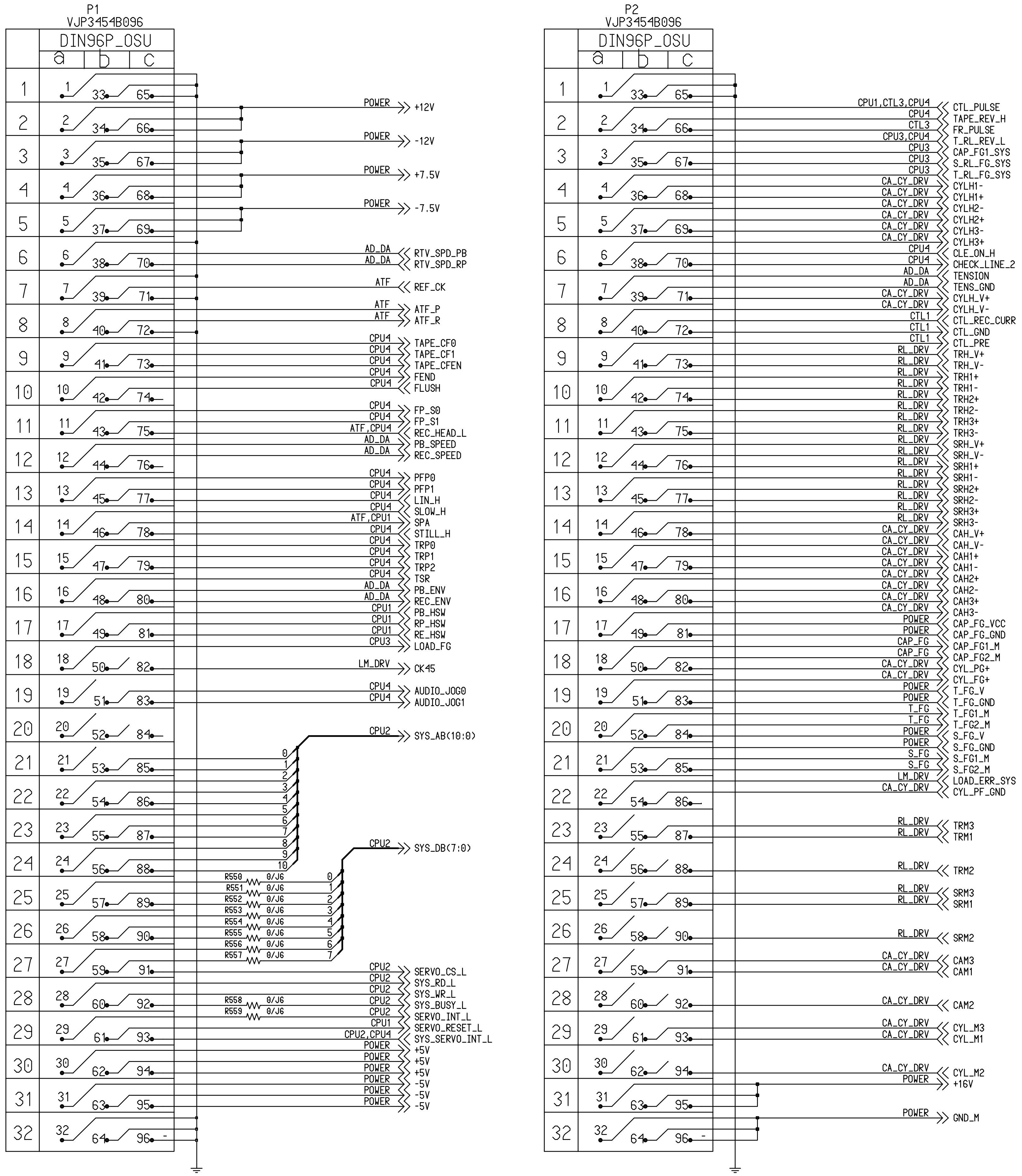
COMPONENT NAME	SERVO (RL DRV)	16/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM016	


P500
*PAT/VJS2509
CK45
IF
1 CK45
2 GND
ATF_REF_CLK
ATF
3 ATF_REF_CLK
4 GND
ATF_PC_CLK
ATF
5 ATF_PC_CLK
6 GND
7 25H_50L
CLK_DATA_LD
CPU4
8 CLK_DATA_LD
PC_ON_H
CPU4
9 PC_ON_H
10 +5V(VCC)
-9VA
+9VA
-5V
VCC
11 -5V
12 +9VA
13 -9VA
+16V
Q500
*PAT
TP500
*PAT
R505
*PAT/J6
R506
*PAT/J6
R502
*PAT/RE
R503
*PAT/RE
IF
LOAD_ERR_SYS
C502
*PAT/UBN
C503
*PAT/EVV
R507
*PAT/J6
VCC
R500
*PAT/J6
CTL_GAIN_ADJ
AD_DA
3
8
VCC
VEE
1
2
4
IC500
*PAT
R501
*PAT/J6
5
8
6
VCC
VEE
7
4
IC500
*PAT
-5VA
R504
*PAT/J6
Q501
*PAT
D500
*PAT
C500
*PAT/UBN
-5VA
C501
*PAT/UBN

COMPONENT NAME	SERVO (LM DRV)	17/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM017	


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
+9VA
R510
560/J6
Q510
2SD601A-RTX
C510
0.01/UBN
C511
16V47/EVV
C512
0.01/UBN
CAP_FG_VCC
IF
R511
390/RE
CAP_FG
CAP_FG_VREF
CAP_FG_GND
R512
390/RE
+9VA
R513
560/J6
Q511
2SD601A-RTX
C513
0.01/UBN
C514
16V47/EVV
C515
0.01/UBN
S_FG_V
R514
390/RE
S_FG,T_FG
RL_VREF
S_FG_GND
R515
390/RE
T_FG_V
R516
390/RE
T_FG_GND
R517
390/RE
GND_M
RL_DRV
RL_GND
CA_CY_DRV,SW2
CYL_GND
CA_CY_DRV,SW2
CAP_GND
L510
VLP0133-T
C524
25V33/EVV
C525
0.01/UBN
VCC
-5V
FROM_TO
FL510
VLF0576T
C533
10V33/EVV
C534
0.01/UBN
-5VD
+16V
GND
TG510
VJR0646
TG511
VJR0646
+12V
FL511
VLF0576T
C516
25V33/EVV
C517
0.01/UBN
IC510
NJM78L09UAT2
IN
GND
OUT
C518
0.01/UBN
D514
MA704A-TX
+9VA
IC511
NJM78L09UAT2
C519
0.01/UBN
D515
MA704A-TX
+9VCTL
-12V
FL512
VLF0576T
C520
25V33/EVV
C521
0.01/UBN
IC512
NJM79L09UAT2
C522
50V1/EVV
D516
MA704A-TX
-9VA
IC513
NJM79L09UAT2
C523
50V1/EVV
D517
MA704A-TX
-9VCTL
+7.5V
FL513
VLF0576T
C526
25V33/EVV
C527
0.01/UBN
IC514
XC62AP5002PL
C528
0.01/UBN
D518
MA704A-TX
+5VA
+5V
FL514
VLF0576T
D510
MA701A-TX
D511
MA701A-TX
C529
25V33/EVV
C530
0.01/UBN
IC515
XC62AP3002PL
C531
0.01/UBN
+3VA
D512
MA701A-TX
D513
MA701A-TX
C538
25V33/EVV
C539
0.01/UBN
IC516
XC62AP3002PL
C532
0.01/UBN
+3VD
-7.5V
FL515
VLF0576T
C535
25V33/EVV
C536
0.01/UBN
IC517
NJM79L05UAT2
C537
50V1/EVV
D519
MA704A-TX
-5VA

COMPONENT NAME	SERVO (POWER)	18/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM018	


P1
VJP3454B096
DIN96P_OSU
a b c
P2
VJP3454B096
DIN96P_OSU
a b c
POWER +12V
POWER -12V
POWER +7.5V
POWER -7.5V
AD_DA RTV_SPD_PB
AD_DA RTV_SPD_RP
ATF REF_CK
ATF ATF_P
ATF ATF_R
CPU4 TAPE_CF0
CPU4 TAPE_CF1
CPU4 TAPE_CFEN
CPU4 FEND
CPU4 FLUSH
CPU4 FP_S0
CPU4 FP_S1
ATF,CPU4 REC_HEAD_L
AD_DA PB_SPEED
AD_DA REC_SPEED
CPU4 PFP0
CPU4 PFP1
CPU4 LIN_H
CPU4 SLOW_H
ATF,CPU1 SPA
CPU4 STILL_H
CPU4 TRP0
CPU4 TRP1
CPU4 TRP2
CPU4 TSR
AD_DA PB_ENV
AD_DA REC_ENV
CPU1 PB_HSW
CPU1 RP_HSW
CPU1 RE_HSW
CPU3 LOAD_FG
LM_DRV CK45
CPU4 AUDIO_JOG0
CPU4 AUDIO_JOG1
CPU2 SYS_AB(10:0)
CPU2 SYS_DB(7:0)
R550 0/J6
R551 0/J6
R552 0/J6
R553 0/J6
R554 0/J6
R555 0/J6
R556 0/J6
R557 0/J6
R558 0/J6
R559 0/J6
CPU2 SERVO_CS_L
CPU2 SYS_RD_L
CPU2 SYS_WR_L
CPU2 SYS_BUSY_L
CPU2 SERVO_INT_L
CPU1 SERVO_RESET_L
CPU2,CPU4 SYS_SERVO_INT_L
POWER +5V
POWER +5V
POWER +5V
POWER -5V
POWER -5V
POWER -5V
CPU1,CTL3,CPU4 CTL_PULSE
CPU4 TAPE_REV_H
CTL3 FR_PULSE
CPU3,CPU4 T_RL_REV_L
CPU3 CAP_FG1_SYS
CPU3 S_RL_FG_SYS
CPU3 T_RL_FG_SYS
CA_CY_DRV CYLH1-
CA_CY_DRV CYLH1+
CA_CY_DRV CYLH2-
CA_CY_DRV CYLH2+
CA_CY_DRV CYLH3-
CA_CY_DRV CYLH3+
CPU4 CLE_ON_H
CPU4 CHECK_LINE_2
AD_DA TENSION
AD_DA TENS_GND
CA_CY_DRV CYLH_V+
CA_CY_DRV CYLH_V-
CTL1 CTL_REC_CURR
CTL1 CTL_GND
CTL1 CTL_PRE
RL_DRV TRH_V+
RL_DRV TRH_V-
RL_DRV TRH1+
RL_DRV TRH1-
RL_DRV TRH2+
RL_DRV TRH2-
RL_DRV TRH3+
RL_DRV TRH3-
RL_DRV SRH_V+
RL_DRV SRH_V-
RL_DRV SRH1+
RL_DRV SRH1-
RL_DRV SRH2+
RL_DRV SRH2-
RL_DRV SRH3+
RL_DRV SRH3-
CA_CY_DRV CAH_V+
CA_CY_DRV CAH_V-
CA_CY_DRV CAH1+
CA_CY_DRV CAH1-
CA_CY_DRV CAH2+
CA_CY_DRV CAH2-
CA_CY_DRV CAH3+
CA_CY_DRV CAH3-
POWER CAP_FG_VCC
POWER CAP_FG_GND
CAP_FG CAP_FG1_M
CAP_FG CAP_FG2_M
CA_CY_DRV CYL_PG+
CA_CY_DRV CYL_FG+
POWER T_FG_V
POWER T_FG_GND
T_FG T_FG1_M
T_FG T_FG2_M
POWER S_FG_V
POWER S_FG_GND
S_FG S_FG1_M
S_FG S_FG2_M
LM_DRV LOAD_ERR_SYS
CA_CY_DRV CYL_PF_GND
RL_DRV TRM3
RL_DRV TRM1
RL_DRV TRM2
RL_DRV SRM3
RL_DRV SRM1
RL_DRV SRM2
CA_CY_DRV CAM3
CA_CY_DRV CAM1
CA_CY_DRV CAM2
CA_CY_DRV CYL_M3
CA_CY_DRV CYL_M1
CA_CY_DRV CYL_M2
POWER +16V
POWER GND_M

COMPONENT NAME	SERVO (IF)	19/19
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP82220A		
PAL:VEP82220B	SCM019	

Specifications

AJ-D850P

GENERAL

Power supply:	AC 120 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature:	41°F to 104°F (5°C to 40°C)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	36.96 lbs (16.8 kg)
Dimensions (W × H × D):	16-3/4 × 6-15/16 × 16-3/8 inches
Recording format:	DVCPRO format
Recording tracks:	Digital video Time code; Recorded in sub-code area Digital audio; 2 channels Cue Signal; 1 track Control (CTL); 1 track
Tape speed:	33.820 mm/sec
Recording time:	184 minutes (with AJ-5P92LP) 66 minutes (with AJ-P66MP)
Tape:	1/4-inch thin magnetic layer metal tape
FF/REW time:	Less than 3 minutes (with AJ-5P92LP) Less than 2 minutes (with AJ-P66MP)
Editing accuracy:	±0 frame (using time code)
Tape timer accuracy:	±1 frame (using continuous CTL signal)
Servo lock time:	Less than 0.5 sec. (color framing/ standby ON)

VIDEO

(Digital video)

Sampling frequencies:	Y; 13.5 MHz/PB, PR; 3.375 MHz
Quantizing:	8 bits
Error correction:	Reed-Solomon product code

(Digital IN/analog component OUT)

Video bandwidth:	Y; 30 Hz to 5.5 MHz (±0.5 dB) 5.75 MHz (–2 dB) PB, PR; 30 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–5 dB) typ.
S/N ratio:	Better than 60 dB
K factor:	Less than 1%

(Analog component IN/component OUT)

Video bandwidth:	Y; 30 Hz to 5.5 MHz (±1 dB) 5.75 MHz (–3 dB) PB, PR; 30 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–6 dB) typ.
S/N ratio:	Better than 55 dB
K factor:	Less than 1%

(Analog composite IN/composite OUT)

Video bandwidth:	Y; 30 Hz to 4.5 MHz (±1 dB)
DG:	Less than 4%
DP:	Less than 3°
Y/C delay:	Better than 20 nsec
K factor:	Less than 2%

(Video input connector)

Analog component input:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.486/0.7 Vp-p switchable, 75Ω (75% color bar, 7.5% setup)
Analog composite input:	BNC×2, loop-through, 75Ω on/off
Reference input:	Analog composite BNC×2, loop-through, 75Ω on/off
Serial digital component input (option):	Complies with SMPTE 259M-C standard, BNC×2, active through

(Video output connector)

Analog component output:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.486/0.7 Vp-p switchable, 75Ω (75% color bar, 7.5% setup)
Analog composite output:	BNC×3 Video1/video2/video3 (superimpose on/off)
Serial digital component output (option):	Complies with SMPTE 259M-C standard, BNC×3

(Video signals adjustment)

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output hue:	±30°
Video output setup:	±15 IRE
Video output sync phase:	±15 µsec
Video output SC phase:	±180°
Video output Y/C delay:	±300 nsec

AUDIO

(Digital audio)

Sampling frequencies:	48 kHz
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ±1 dB
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, “A” weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk:	Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	20 dB
Emphasis:	T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response:	300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analog input (CH1/CH2):	XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2):	XLR×1, AES/EBU format
Serial digital input (option):	Complies with SMPTE 259M-C, 272M standard (BNC, 75Ω)
Cue track input:	XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analog output (CH1/CH2):	XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2):	XLR×1, AES/EBU format
Serial digital output (option):	Complies with SMPTE 259M-C, 272M standard (BNC, 75Ω)
Cue track output:	XLR×1, low impedance, +4/0/–20 dBu
Monitor output:	XLR×2, low impedance, +4/0/–20 dBu
Headphones:	Variable level, mini-jack, 8Ω

Other input/output connector

Time code input:	XLR×1, 0.5 to 8 Vp-p
Time code output:	XLR×1, 2.0 Vp-p
RS-422A input/output:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions shown are approximately.
Specifications are subject to change without notice.

IMPORTANT

“Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws.”

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:
To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

WARNING:
To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD TO AUTHORIZED SERVICE PERSONNEL.

FCC Note:
This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

☐ is the safety information.

- Do not insert fingers or any objects into the video casette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either Color or Black & White recording.
- Do not attempt to disassemble the recorder. There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Refer any needed servicing to authorized service personnel.

Specifications

GENERAL

Power supply:	AC 220 – 240 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature:	5°C to 40°C (41°F to 104°F)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	16.8 kg
Dimensions (W × H × D):	424 × 175 × 415 mm
Recording format:	DVCPRO format
Recording tracks:	Digital video Time code; Recorded in sub-code area Digital audio; 2 channels Cue signal; 1 track Control (CTL); 1 track
Tape speed:	33.854 mm/sec
Tape:	1/4-inch thin magnetic layer metal tape
Editing accuracy:	±0 frame (using time code)
Tape timer accuracy:	±1 frame (using continuous CTL signal)
Servo lock time:	Less than 0.5 sec. (colour framing/ standby ON)

VIDEO

(Digital video)

Sampling frequencies:	Y; 13.5 MHz/PB, PR; 3.375 MHz
Quantizing:	8 bits
Error correction:	Reed-Solomon product code

(Digital IN/analogue component OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±0.5 dB) 5.75 MHz (–2 dB) PB, PR; 25 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–5 dB) typ.
S/N ratio:	Better than 60 dB
K factor:	Less than 1%

(Analogue component IN/component OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±1 dB) 5.75 MHz (–3 dB) PB, PR; 25 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–6 dB) typ.
S/N ratio:	Better than 55 dB
K factor:	Less than 1%

(Analogue composite IN/composite OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±1 dB) typ.
DG:	Less than 4%
DP:	Less than 3°
Y/C delay:	Better than 20 nsec
K factor:	Less than 2.5%

(Video input connector)

Analogue component input:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite input:	BNC×2, loop-through, 75Ω on/off
Reference input:	Analogue composite BNC×2, loop-through, 75Ω on/off
Serial digital component input (option):	Complies with EBU Tech. 3267-E standard, BNC×2, active through

(Video output connector)

Analogue component output:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite output:	BNC×3 Video1/video2/video3 (superimpose on/off)
Serial digital component output (option):	Complies with EBU Tech. 3267-E standard, BNC×3

(Video signals adjustment)

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output chroma phase:	±30°
Video output black level:	±100 mV
Video output sync phase:	±15 µsec
Video output SC phase:	±180°
Video output Y/C delay:	±300 nsec

AUDIO

(Digital audio)

Sampling frequencies:	48 kHz
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ±1 dB
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, “A” weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk:	Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	18 dB
Emphasis:	T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response:	300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analogue input (CH1/CH2):	XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2):	XLR×1, AES/EBU format
Serial digital input (option):	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track input:	XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analogue output (CH1/CH2):	XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2):	XLR×1, AES/EBU format
Serial digital output (option):	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track output:	XLR×1, low impedance, +4/0/–20 dBu
Monitor output:	XLR×2, low impedance, +4/0/–20 dBu
Headphones:	Variable level, mini-jack, 8Ω

Other input/output connector

Time code input:	XLR×1, 0.5 to 8 Vp-p
Time code output:	XLR×1, 2.0 Vp-p
RS-422A input/output:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions shown are approximately.
Specifications are subject to change without notice.

IMPORTANT

“Unauthorized recording of copyrighted television programmes, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws.”

- **THIS APPARATUS MUST BE EARTHED**

  To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.

  Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

  The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

- **DO NOT REMOVE PANEL COVER BY UNSCREWING**

  To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

CAUTION:

Do not install or place this unit in a bookcase, built in cabinet or in another confined space in order to keep well ventilated condition. Ensure that curtains and any other materials do not obstruct the ventilation condition to prevent risk of electric shock or fire hazard due to overheating.

WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSOIRES ONLY.

CAUTION:

To reduce the risk of fire or shock hazard, refer change of switch setting inside the unit to qualified service personnel.

Operating precaution

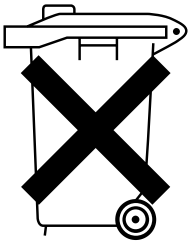
Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio singals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

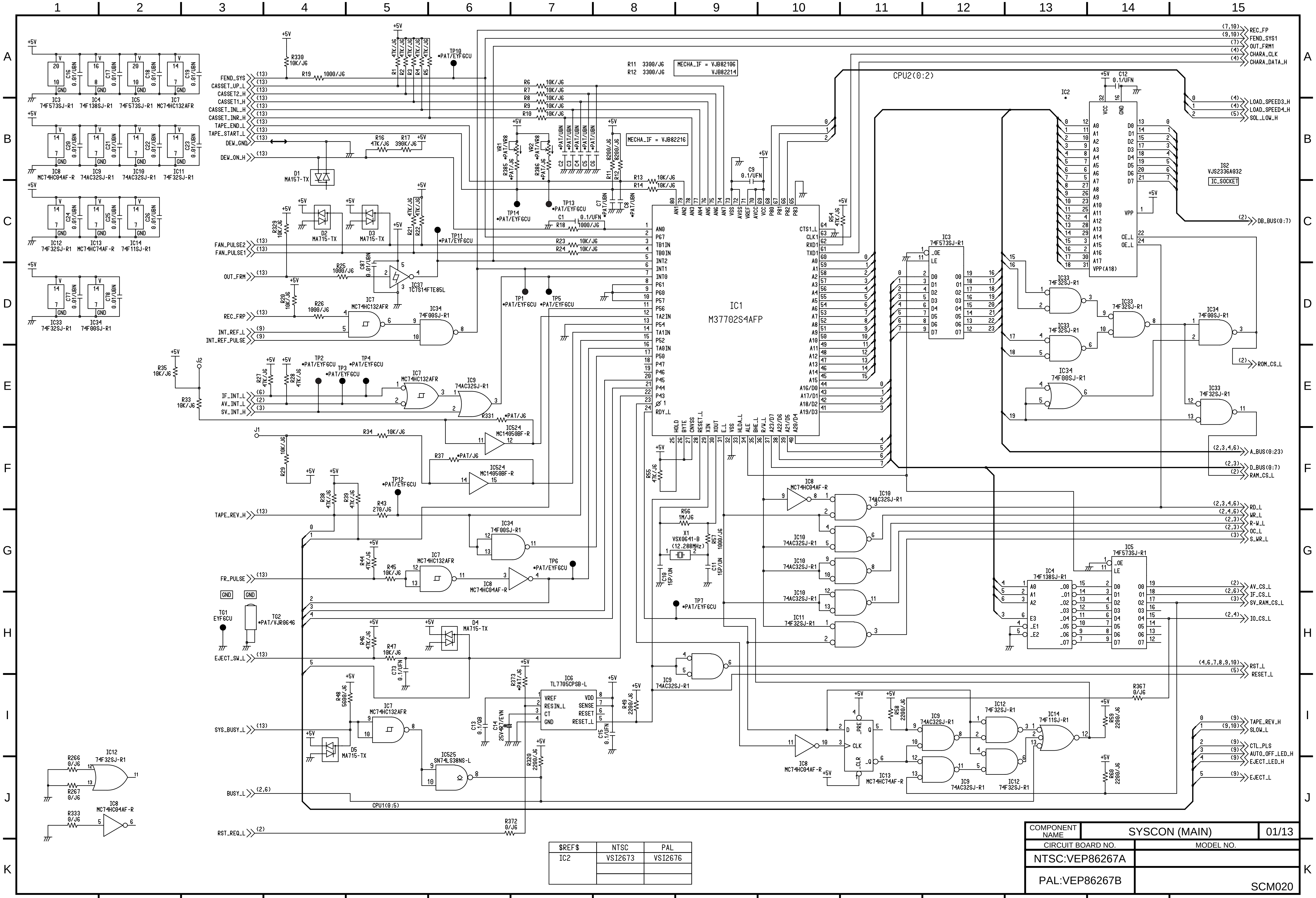
☐ is the safety information.

Attention/Attentie

- This apparatus contains a lithium battery for memory back-up.
- For the removal of the battery at the moment of the disposal at the end of the service life please consult your dealer.
- Do not throw away the battery. Instead, hand it in as hazardous waste.

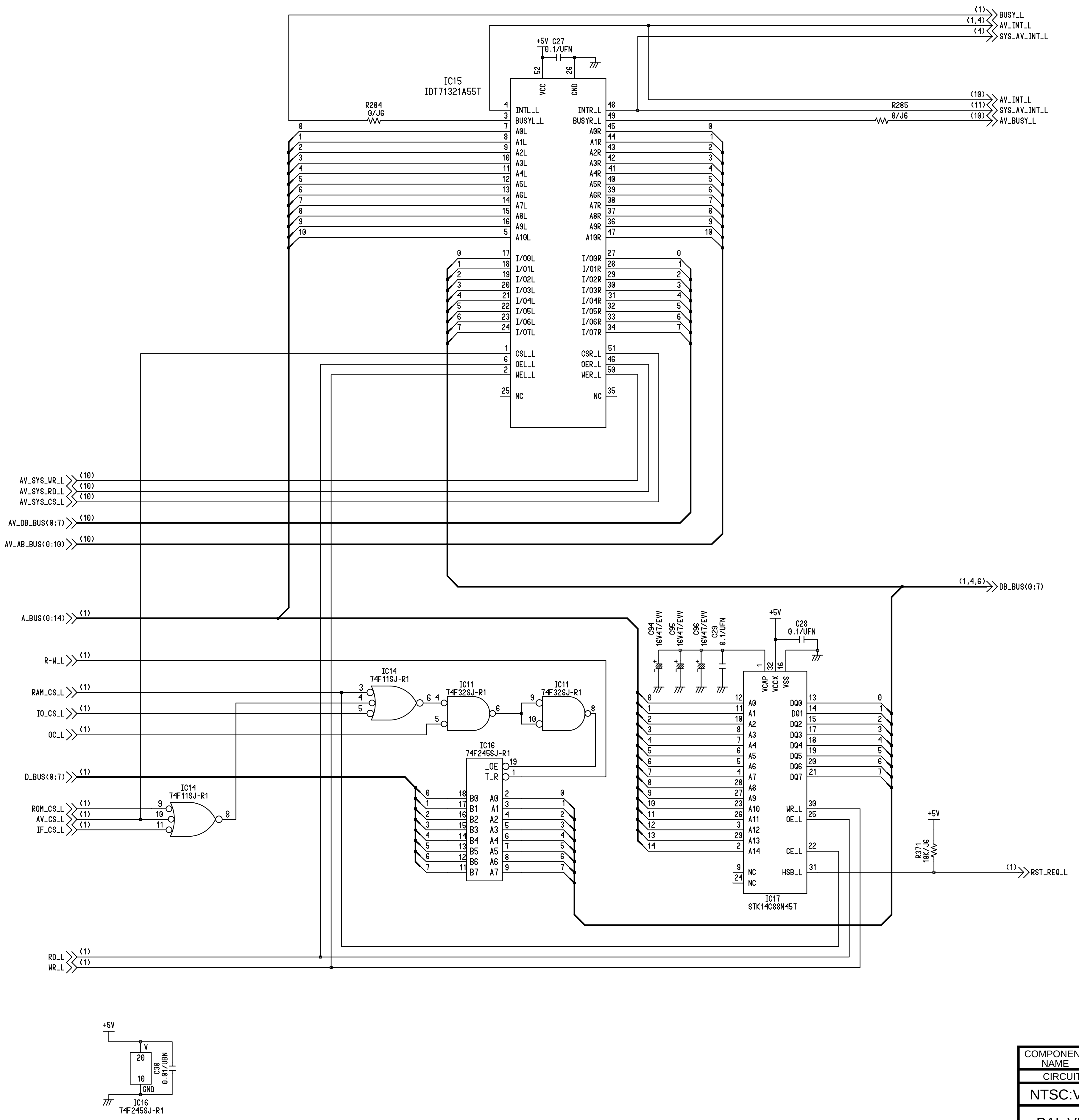
- Dit apparaat bevat een lithiumbatterij voor memory back-up.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.
- Gooi de batterij niet weg, maar lever hem in als KCA.




IC1
M37702S4AFP
IC2
VSI2336A032
IC_SOCKET
CPU2(0:2)
CPU1(0:5)
MECHA_IF = VJB82106
VJB82214
MECHA_IF = VJB82216
R11 3300/J6
R12 3300/J6
IC3 74F573SJ-R1
IC4 74F138SJ-R1
IC5 74F573SJ-R1
IC6 TL7705CPSB-L
IC7 MC74HC132AFR
IC8 MC74HC04AF-R
IC9 74AC32SJ-R1
IC10 74AC32SJ-R1
IC11 74F32SJ-R1
IC12 74F32SJ-R1
IC13 MC74HC74AF-R
IC14 74F11SJ-R1
IC33 74F32SJ-R1
IC34 74F00SJ-R1
IC37 TC7S14FTE85L
IC524 MC14050BF-R
IC525 SN74LS38NS-L
X1 VSX0641-B (12.288MHz)
D1 MA157-TX
D2 MA715-TX
D3 MA715-TX
D4 MA715-TX
D5 MA715-TX
FEND_SYS
CASSET_UP_L
CASSET2_H
CASSET1_H
CASSET_INL_H
CASSET_INR_H
TAPE_END_L
TAPE_START_L
DEW_GND
DEW_ON_H
FAN_PULSE2
FAN_PULSE1
OUT_FRM
REC_FRP
INT_REF_L
INT_REF_PULSE
IF_INT_L
AV_INT_L
SV_INT_H
TAPE_REV_H
FR_PULSE
EJECT_SW_L
SYS_BUSY_L
BUSY_L
RST_REQ_L
REC_FP
FEND_SYS1
OUT_FRM1
CHARA_CLK
CHARA_DATA_H
LOAD_SPEED3_H
LOAD_SPEED4_H
SOL_LOW_H
DB_BUS(0:7)
ROM_CS_L
A_BUS(0:23)
D_BUS(0:7)
RAM_CS_L
RD_L
WR_L
R-W_L
OC_L
S_WR_L
AV_CS_L
IF_CS_L
SV_RAM_CS_L
IO_CS_L
RST_L
RESET_L
TAPE_REV_H
SLOW_L
CTL_PLS
AUTO_OFF_LED_H
EJECT_LED_H
EJECT_L
TG1 EYF6CU
TG2 *PAT/VJR0646
GND
J1
J2

REF	NTSC	PAL
IC2	VSI2673	VSI2676

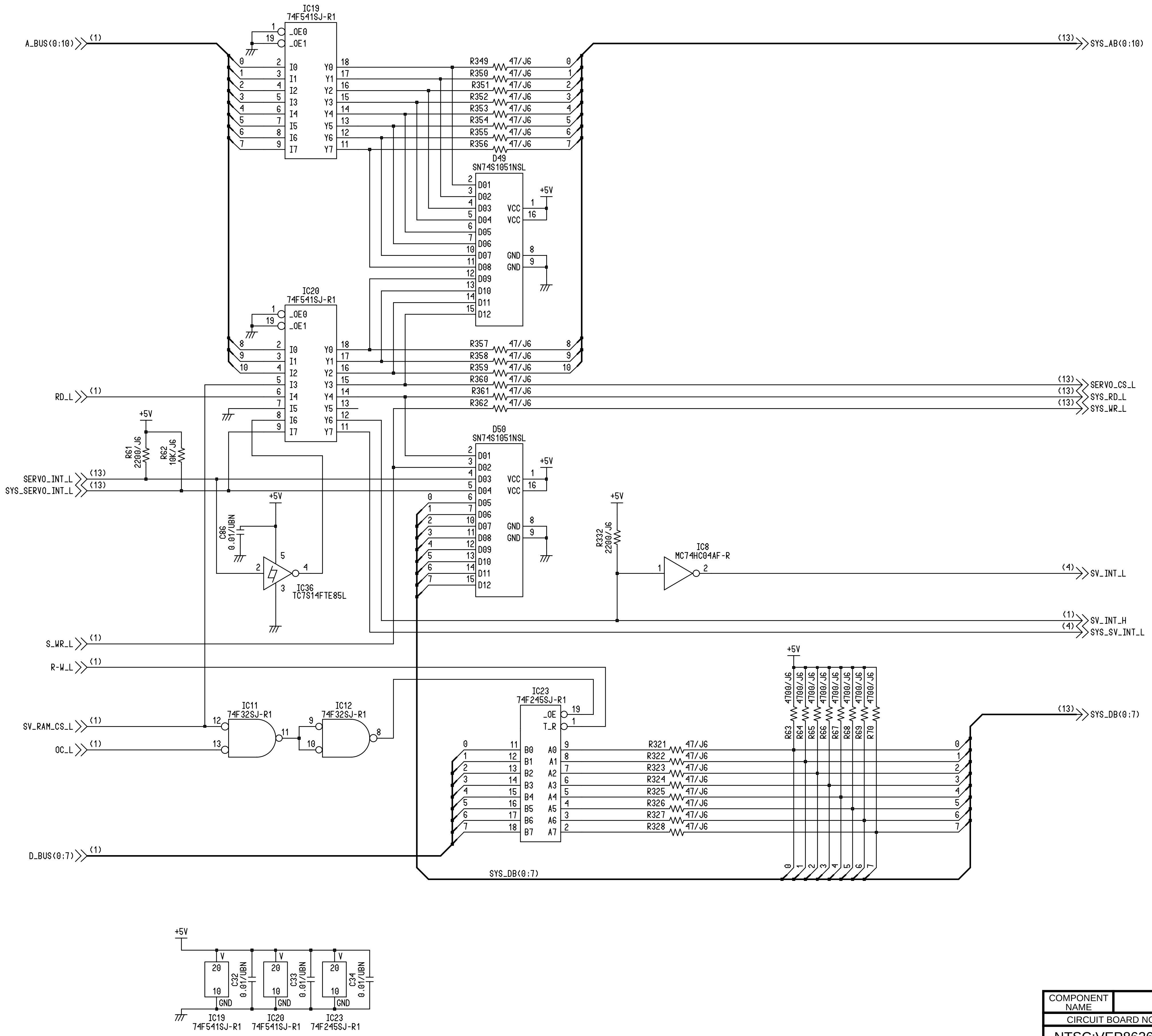
COMPONENT NAME	SYSCON (MAIN)	01/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM020	



IC15
IDT71321A55T
+5V C27 0.1/UFN
VCC
GND
INTL_L
BUSYL_L
A0L A1L A2L A3L A4L A5L A6L A7L A8L A9L A10L
I/O0L I/O1L I/O2L I/O3L I/O4L I/O5L I/O6L I/O7L
CSL_L
OEL_L
WEL_L
NC
INTR_L
BUSYR_L
A0R A1R A2R A3R A4R A5R A6R A7R A8R A9R A10R
I/O0R I/O1R I/O2R I/O3R I/O4R I/O5R I/O6R I/O7R
CSR_L
OER_L
WER_L
R284 0/J6
R285 0/J6
(1) BUSY_L
(1,4) AV_INT_L
(4) SYS_AV_INT_L
(10) AV_INT_L
(11) SYS_AV_INT_L
(10) AV_BUSY_L
AV_SYS_WR_L (10)
AV_SYS_RD_L (10)
AV_SYS_CS_L (10)
AV_DB_BUS(0:7) (10)
AV_AB_BUS(0:10) (10)
(1,4,6) DB_BUS(0:7)
A_BUS(0:14) (1)
R-W_L (1)
RAM_CS_L (1)
IO_CS_L (1)
OC_L (1)
D_BUS(0:7) (1)
ROM_CS_L (1)
AV_CS_L (1)
IF_CS_L (1)
RD_L (1)
WR_L (1)
IC14 74F11SJ-R1
IC11 74F32SJ-R1
IC11 74F32SJ-R1
IC14 74F11SJ-R1
IC16 74F245SJ-R1
_OE
T_R
B0 B1 B2 B3 B4 B5 B6 B7
A0 A1 A2 A3 A4 A5 A6 A7
C94 16V47/EVV
C95 16V47/EVV
C96 16V47/EVV
C29 0.1/UFN
+5V C28 0.1/UFN
VCAP VCCX VSS
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7
WR_L
OE_L
CE_L
HSB_L
NC
IC17
STK14C88N45T
+5V
R371 10K/J6
(1) RST_REQ_L
+5V
C30 0.01/UBN
V
GND
IC16
74F245SJ-R1

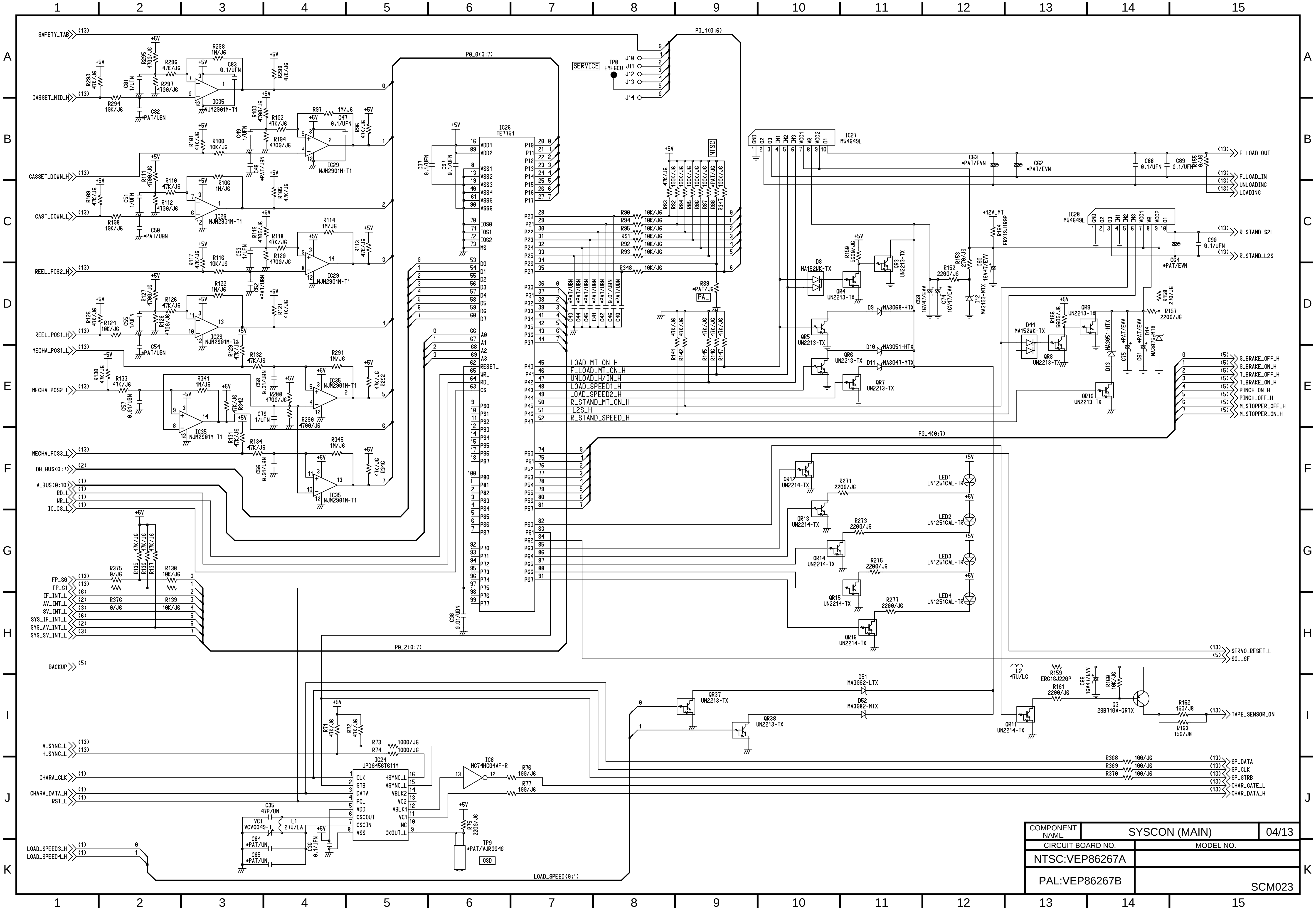
COMPONENT NAME	SYSCON (MAIN)	02/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B		

SCM021


A_BUS(0:10)
SYS_AB(0:10)
IC19
74F541SJ-R1
R349 - R356 47/J6
D49
SN74S1051NSL
IC20
74F541SJ-R1
R357 - R362 47/J6
RD_L
SERVO_CS_L
SYS_RD_L
SYS_WR_L
D50
SN74S1051NSL
R61 2200/J6
R62 10K/J6
SERVO_INT_L
SYS_SERVO_INT_L
C86 0.01/UBN
IC36
TC7S14FTE85L
R332 2200/J6
IC8
MC74HC04AF-R
SV_INT_L
SV_INT_H
SYS_SV_INT_L
S_WR_L
R-W_L
SV_RAM_CS_L
OC_L
IC11
74F32SJ-R1
IC12
74F32SJ-R1
IC23
74F245SJ-R1
R321 - R328 47/J6
R63 - R70 4700/J6
SYS_DB(0:7)
D_BUS(0:7)
+5V
C32 0.01/UBN
C33 0.01/UBN
C34 0.01/UBN
IC19 74F541SJ-R1
IC20 74F541SJ-R1
IC23 74F245SJ-R1

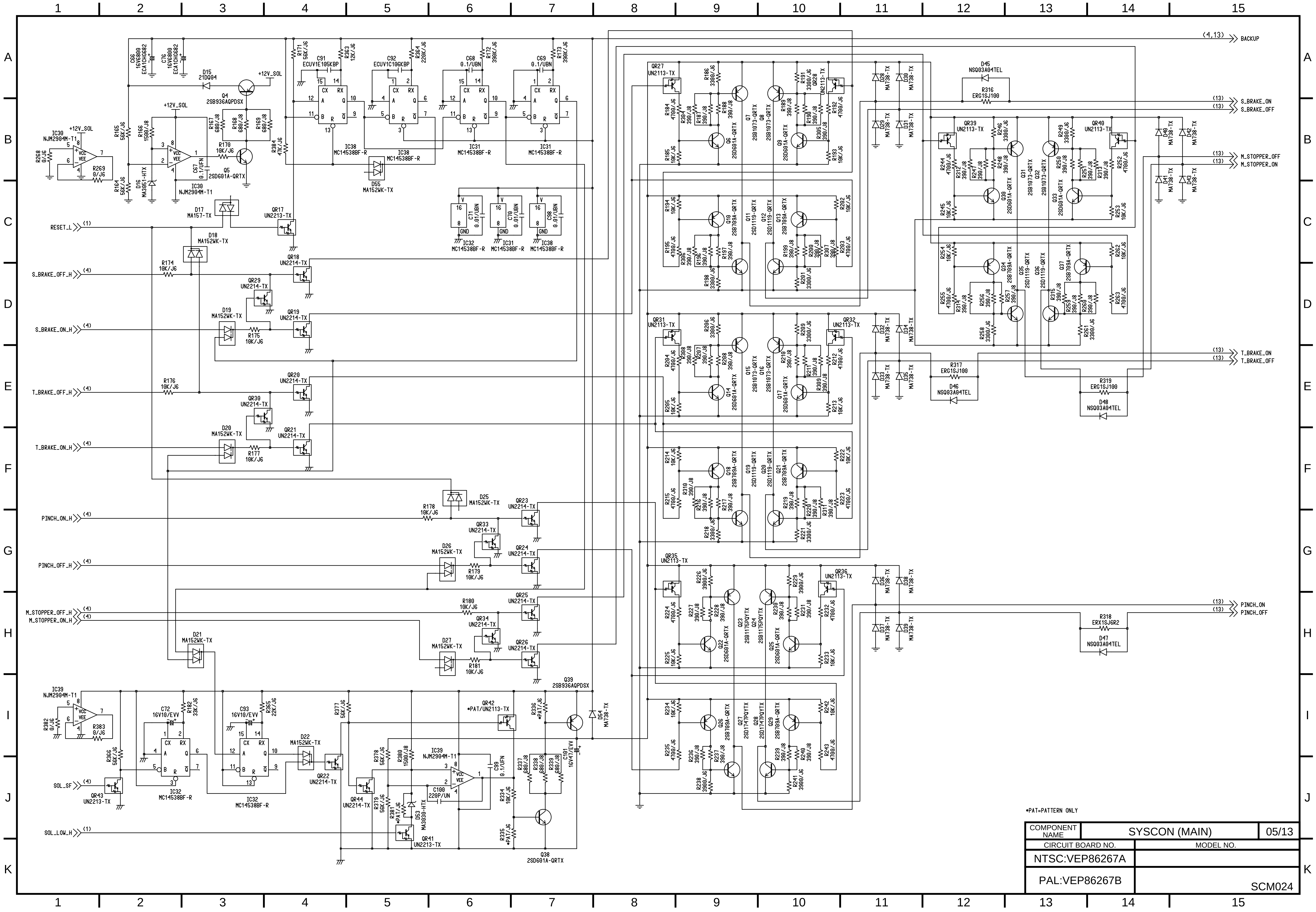
COMPONENT NAME	SYSCON (MAIN)	03/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B		

SCM022



SAFETY_TAB
CASSET_MID_H
CASSET_DOWN_H
CAST_DOWN_L
REEL_POS2_H
REEL_POS1_H
MECHA_POS1_L
MECHA_POS2_L
MECHA_POS3_L
DB_BUS(0:7)
A_BUS(0:10)
RD_L
WR_L
IO_CS_L
FP_S0
FP_S1
IF_INT_L
AV_INT_L
SV_INT_L
SYS_IF_INT_L
SYS_AV_INT_L
SYS_SV_INT_L
BACKUP
V_SYNC_L
H_SYNC_L
CHARA_CLK
CHARA_DATA_H
RST_L
LOAD_SPEED3_H
LOAD_SPEED4_H
IC26
TE7751
IC35 NJM2901M-T1
IC29 NJM2901M-T1
IC27 M54649L
IC28 M54649L
IC24 UPD6456T611Y
IC8 MC74HC04AF-R
SERVICE
TP8 EYF6CU
J10
J11
J12
J13
J14
NTSC
PAL
P0_0(0:7)
P0_1(0:6)
P0_2(0:7)
P0_4(0:7)
LOAD_MT_ON_H
F_LOAD_MT_ON_H
UNLOAD_H/IN_H
LOAD_SPEED1_H
LOAD_SPEED2_H
R_STAND_MT_ON_H
L2S_H
R_STAND_SPEED_H
F_LOAD_OUT
F_LOAD_IN
UNLOADING
LOADING
R_STAND_S2L
R_STAND_L2S
S_BRAKE_OFF_H
S_BRAKE_ON_H
T_BRAKE_OFF_H
T_BRAKE_ON_H
PINCH_ON_H
PINCH_OFF_H
M_STOPPER_OFF_H
M_STOPPER_ON_H
LED1 LN1251CAL-TR
LED2 LN1251CAL-TR
LED3 LN1251CAL-TR
LED4 LN1251CAL-TR
SERVO_RESET_L
SOL_SF
TAPE_SENSOR_ON
Q3 2SB710A-QRTX
SP_DATA
SP_CLK
SP_STRB
CHAR_GATE_L
CHAR_DATA_H
TP9 *PAT/VJR0646
OSD
LOAD_SPEED(0:1)
VC1 VCV0049-T
L1 27U/LA
L2 47U/LC
D51 MA3062-LTX
D52 MA3082-MTX
QR37 UN2213-TX
QR38 UN2213-TX
QR11 UN2214-TX
+5V
+12V_MT

COMPONENT NAME	SYSCON (MAIN)	04/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B		SCM023


BACKUP
(4,13)
S_BRAKE_ON
S_BRAKE_OFF
M_STOPPER_OFF
M_STOPPER_ON
T_BRAKE_ON
T_BRAKE_OFF
PINCH_ON
PINCH_OFF
(13)
RESET_L
S_BRAKE_OFF_H
S_BRAKE_ON_H
T_BRAKE_OFF_H
T_BRAKE_ON_H
PINCH_ON_H
PINCH_OFF_H
M_STOPPER_OFF_H
M_STOPPER_ON_H
SOL_SF
SOL_LOW_H
(1)
(4)
+12V_SOL
IC30 NJM2904M-T1
IC39 NJM2904M-T1
IC38 MC14538BF-R
IC31 MC14538BF-R
IC32 MC14538BF-R
Q4 2SB936AQPDSX
Q5 2SD601A-QRTX
Q39 2SB936AQPDSX
Q38 2SD601A-QRTX
D15 21DQ04
D16 MA3051-HTX
D17 MA157-TX
D18 MA152WK-TX
D19 MA152WK-TX
D20 MA152WK-TX
D21 MA152WK-TX
D22 MA152WK-TX
D25 MA152WK-TX
D26 MA152WK-TX
D27 MA152WK-TX
D55 MA152WK-TX
D53 MA3030-HTX
D54 MA738-TX
D45 NSQ03A04TEL
D46 NSQ03A04TEL
D47 NSQ03A04TEL
D48 NSQ03A04TEL
R316 ERG1SJ100
R317 ERG1SJ100
R319 ERG1SJ100
R318 ERX1SJ6R2
QR17 UN2213-TX
QR18 UN2214-TX
QR19 UN2214-TX
QR20 UN2214-TX
QR21 UN2214-TX
QR22 UN2214-TX
QR23 UN2214-TX
QR24 UN2214-TX
QR25 UN2214-TX
QR26 UN2214-TX
QR27 UN2113-TX
QR28 UN2113-TX
QR29 UN2214-TX
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QR31 UN2113-TX
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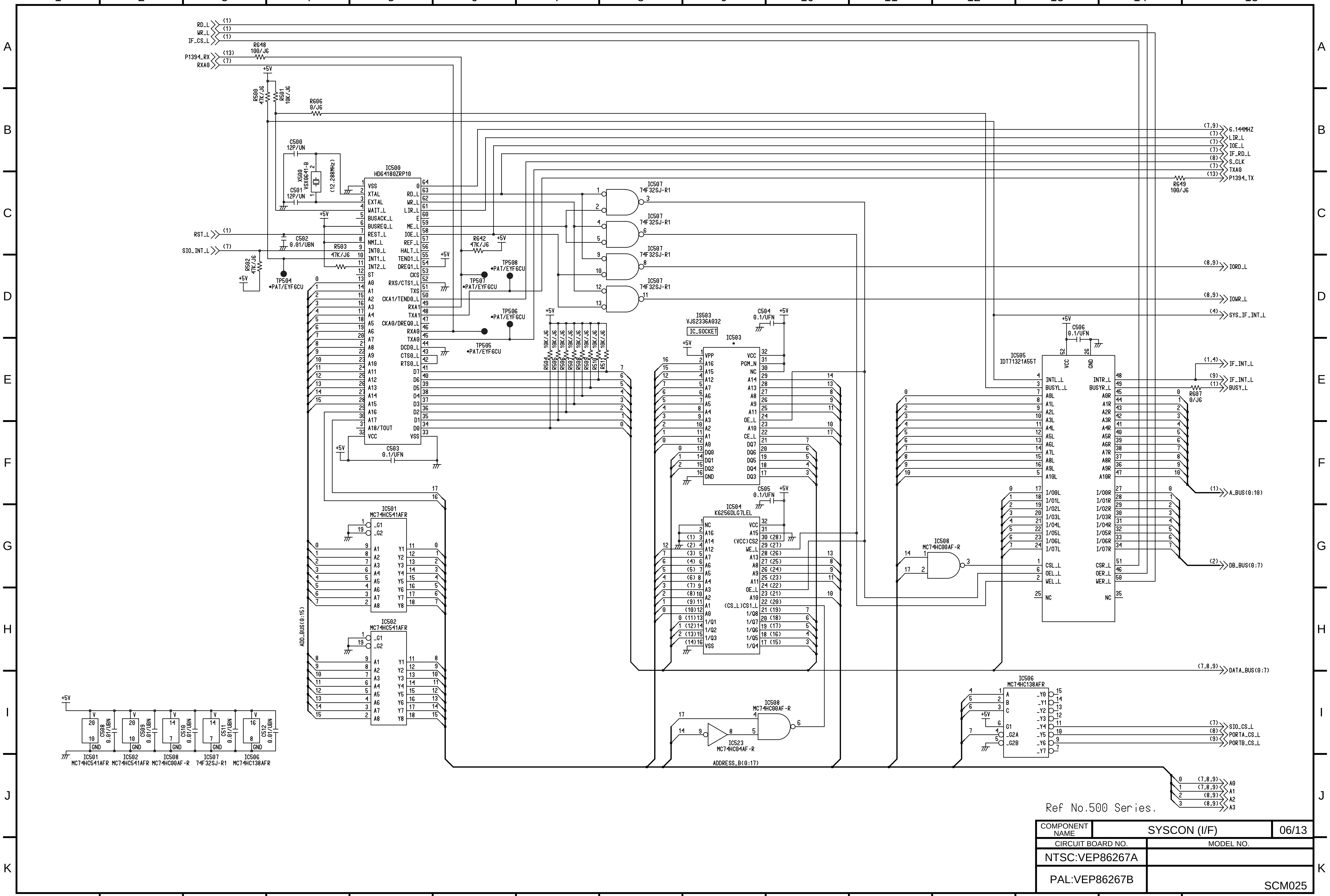
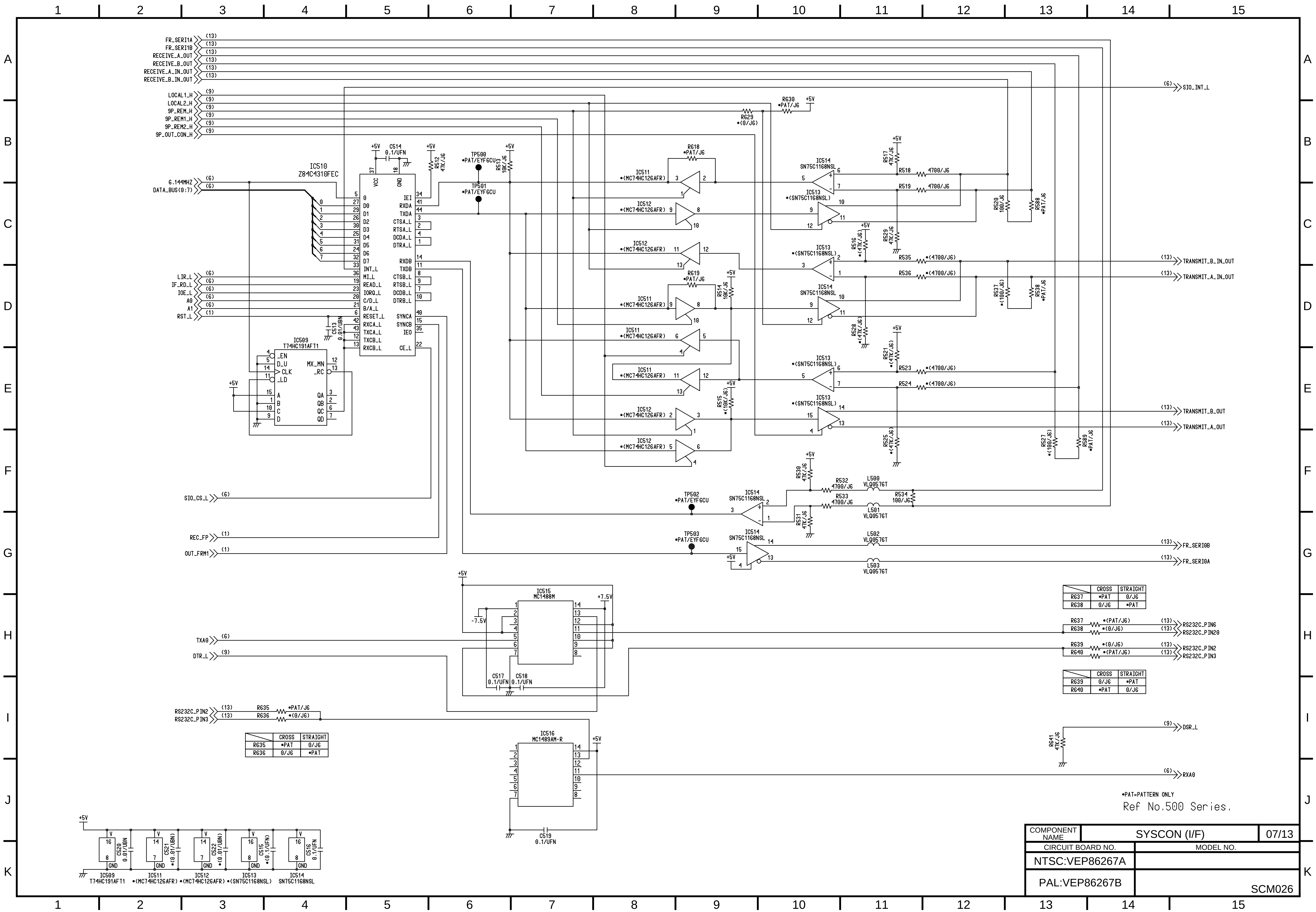
QR34 UN2214-TX
QR35 UN2113-TX
QR36 UN2113-TX
QR39 UN2113-TX
QR40 UN2113-TX
QR41 UN2213-TX
QR42 *PAT/UN2113-TX
QR43 UN2213-TX
QR44 UN2214-TX
Q7 2SB1073-QRTX
Q8 2SB1073-QRTX
Q6 2SD601A-QRTX
Q9 2SD601A-QRTX
Q10 2SB709A-QRTX
Q11 2SD1119-QRTX
Q12 2SD1119-QRTX
Q13 2SB709A-QRTX
Q15 2SB1073-QRTX
Q16 2SB1073-QRTX
Q14 2SD601A-QRTX
Q17 2SD601A-QRTX
Q18 2SB709A-QRTX
Q19 2SD1119-QRTX
Q20 2SD1119-QRTX
Q21 2SB709A-QRTX
Q23 2SB1175PQYTX
Q24 2SB1175PQYTX
Q22 2SD601A-QRTX
Q25 2SD601A-QRTX
Q26 2SB709A-QRTX
Q27 2SD1747PQYTX
Q28 2SD1747PQYTX
Q29 2SB709A-QRTX
Q31 2SB1073-QRTX
Q32 2SB1073-QRTX
Q30 2SD601A-QRTX
Q33 2SD601A-QRTX
Q34 2SB709A-QRTX
Q35 2SD1119-QRTX
Q36 2SD1119-QRTX
Q37 2SB709A-QRTX
D28–D44 MA738-TX
C91 ECUV1E105KBP
C92 ECUV1C106KBP
C68 0.1/UBN
C69 0.1/UBN
C72 16V10/EVV
C93 16V10/EVV
C100 220P/UN
C101 16V47/EVV
C99 0.1/UFN
C67 0.1/UFN
C66 16V6800 ECA1CHG682
C76 16V6800 ECA1CHG682
*PAT=PATTERN ONLY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	SYSCON (MAIN)	05/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM024	


RD_L (1)
WR_L (1)
IF_CS_L (1)
P1394_RX (13)
RXA0 (7)
R648 100/J6
+5V
R600 47K/J6
R601 10K/J6
R606 0/J6
C500 12P/UN
X500 VSX0641-B
(12.288MHz)
C501 12P/UN
IC500 HD64180ZRP10
VSS XTAL EXTAL WAIT_L BUSACK_L BUSREQ_L REST_L NMI_L INT0_L INT1_L INT2_L ST
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18/TOUT VCC
Φ RD_L WR_L LIR_L E ME_L IOE_L REF_L HALT_L TEND1_L DREQ1_L CKS RXS/CTS1_L TXS CKA1/TEND0_L RXA1 TXA1 CKA0/DREQ0_L RXA0 TXA0 DCD0_L CTS0_L RTS0_L D7 D6 D5 D4 D3 D2 D1 D0 VSS
RST_L (1)
SIO_INT_L (7)
C502 0.01/UBN
R503 47K/J6
R602 47K/J6
TP504 *PAT/EYF6CU
TP507 *PAT/EYF6CU
TP508 *PAT/EYF6CU
TP505 *PAT/EYF6CU
TP506 *PAT/EYF6CU
R642 47K/J6
C503 0.1/UFN
R504 R505 R506 R507 R508 R509 R510 R511 10K/J6
IC507 74F32SJ-R1
IS503 VJS2336A032
IC_SOCKET
IC503
VPP A16 A15 A12 A7 A6 A5 A4 A3 A2 A1 A0 DQ0 DQ1 DQ2 GND
VCC PGM_N NC A14 A13 A8 A9 A11 OE_L A10 CE_L DQ7 DQ6 DQ5 DQ4 DQ3
C504 0.1/UFN
IC504 K6256DLG7LEL
NC A16 A14 A12 A7 A6 A5 A4 A3 A2 A1 A0 I/Q1 I/Q2 I/Q3 VSS
VCC A15 (VCC)CS2 WE_L A13 A8 A9 A11 OE_L A10 (CS_L)CS1_L I/Q8 I/Q7 I/Q6 I/Q5 I/Q4
C505 0.1/UFN
IC505 IDT71321A55T
C506 0.1/UFN
INTL_L BUSYL_L A0L A1L A2L A3L A4L A5L A6L A7L A8L A9L A10L I/O0L I/O1L I/O2L I/O3L I/O4L I/O5L I/O6L I/O7L CSL_L OEL_L WEL_L NC
INTR_L BUSYR_L A0R A1R A2R A3R A4R A5R A6R A7R A8R A9R A10R I/O0R I/O1R I/O2R I/O3R I/O4R I/O5R I/O6R I/O7R CSR_L OER_L WER_L NC
(7,9) 6.144MHZ
(7) LIR_L
(7) IOE_L
(7) IF_RD_L
(8) S_CLK
(7) TXA0
(13) P1394_TX
R649 100/J6
(8,9) IORD_L
(8,9) IOWR_L
(4) SYS_IF_INT_L
(1,4) IF_INT_L
(9) IF_INT_L
(1) BUSY_L
R607 0/J6
(1) A_BUS(0:10)
(2) DB_BUS(0:7)
(7,8,9) DATA_BUS(0:7)
IC508 MC74HC00AF-R
IC501 MC74HC541AFR
IC502 MC74HC541AFR
_G1 _G2 A1 A2 A3 A4 A5 A6 A7 A8 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
ADD_BUS(0:15)
IC523 MC74HC04AF-R
ADDRESS_B(0:17)
IC506 MC74HC138AFR
A B C G1 _G2A _G2B _Y0 _Y1 _Y2 _Y3 _Y4 _Y5 _Y6 _Y7
(7) SIO_CS_L
(8) PORTA_CS_L
(9) PORTB_CS_L
(7,8,9) A0
(7,8,9) A1
(8,9) A2
(8,9) A3
C508 0.01/UBN
C509 0.01/UBN
C510 0.01/UBN
C511 0.01/UBN
C512 0.01/UBN
IC501 MC74HC541AFR
IC502 MC74HC541AFR
IC508 MC74HC00AF-R
IC507 74F32SJ-R1
IC506 MC74HC138AFR
Ref No.500 Series.

COMPONENT NAME	SYSCON (I/F)	06/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM025	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12
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A
B
C
D
E
F
G
H
I
J
K
FR_SERI1A (13)
FR_SERI1B (13)
RECEIVE_A_OUT (13)
RECEIVE_B_OUT (13)
RECEIVE_A_IN_OUT (13)
RECEIVE_B_IN_OUT (13)
LOCAL1_H (9)
LOCAL2_H (9)
9P_REM_H (9)
9P_REM1_H (9)
9P_REM2_H (9)
9P_OUT_CON_H (9)
6.144MHZ (6)
DATA_BUS(0:7) (6)
LIR_L (6)
IF_RD_L (6)
IOE_L (6)
A0 (6)
A1 (6)
RST_L (1)
IC510
Z84C4310FEC
VCC
GND
IEI
RXDA
TXDA
CTSA_L
RTSA_L
DCDA_L
DTRA_L
RXDB
TXDB
CTSB_L
RTSB_L
DCDB_L
DTRB_L
SYNCA
SYNCB
IEO
CE_L
D0
D1
D2
D3
D4
D5
D6
D7
INT_L
M1_L
READ_L
IORQ_L
C/D_L
B/A_L
RESET_L
RXCA_L
TXCA_L
TXCB_L
RXCB_L
+5V
C514
0.1/UFN
R512
4.7K/J6
TP500
*PAT/EYF6CU
TP501
*PAT/EYF6CU
R513
10K/J6
C513
0.01/UBN
IC509
T74HC191AFT1
_EN
D_U
CLK
_LD
MX_MN
_RC
QA
QB
QC
QD
R618
*PAT/J6
IC511
*(MC74HC126AFR)
IC512
*(MC74HC126AFR)
R619
*PAT/J6
R514
10K/J6
R515
*(10K/J6)
R630
*PAT/J6
R629
*(0/J6)
IC514
SN75C1168NSL
IC513
*(SN75C1168NSL)
R517
47K/J6
R518
470Ω/J6
R519
470Ω/J6
R520
100/J6
R588
*PAT/J6
R516
*(47K/J6)
R529
47K/J6
R535
*(470Ω/J6)
R536
*(470Ω/J6)
R537
*(100/J6)
R538
*PAT/J6
R528
*(47K/J6)
R521
*(47K/J6)
R523
*(470Ω/J6)
R524
*(470Ω/J6)
R525
*(47K/J6)
R527
*(100/J6)
R589
*PAT/J6
SIO_INT_L (6)
TRANSMIT_B_IN_OUT (13)
TRANSMIT_A_IN_OUT (13)
TRANSMIT_B_OUT (13)
TRANSMIT_A_OUT (13)
SIO_CS_L (6)
REC_FP (1)
OUT_FRM1 (1)
TP502
*PAT/EYF6CU
TP503
*PAT/EYF6CU
R530
47K/J6
R531
47K/J6
R532
470Ω/J6
R533
470Ω/J6
R534
100/J6
L500
VLQ0576T
L501
VLQ0576T
L502
VLQ0576T
L503
VLQ0576T
FR_SERI0B (13)
FR_SERI0A (13)
IC515
MC1488M
+7.5V
-7.5V
C517
0.1/UFN
C518
0.1/UFN
TXA0 (6)
DTR_L (9)
R637
*(PAT/J6)
R638
*(0/J6)
R639
*(0/J6)
R640
*(PAT/J6)
RS232C_PIN6 (13)
RS232C_PIN20 (13)
RS232C_PIN2 (13)
RS232C_PIN3 (13)
RS232C_PIN2 (13)
RS232C_PIN3 (13)
R635
*PAT/J6
R636
*(0/J6)
IC516
MC1489AN-R
C519
0.1/UFN
R641
47K/J6
DSR_L (9)
RXA0 (6)
C520
0.01/UBN
C521
*(0.01/UBN)
C522
*(0.01/UBN)
C515
*(0.1/UFN)
C516
0.1/UFN
IC509
T74HC191AFT1
IC511
*(MC74HC126AFR)
IC512
*(MC74HC126AFR)
IC513
*(SN75C1168NSL)
IC514
SN75C1168NSL
GND

	CROSS	STRAIGHT
R637	*PAT	0/J6
R638	0/J6	*PAT

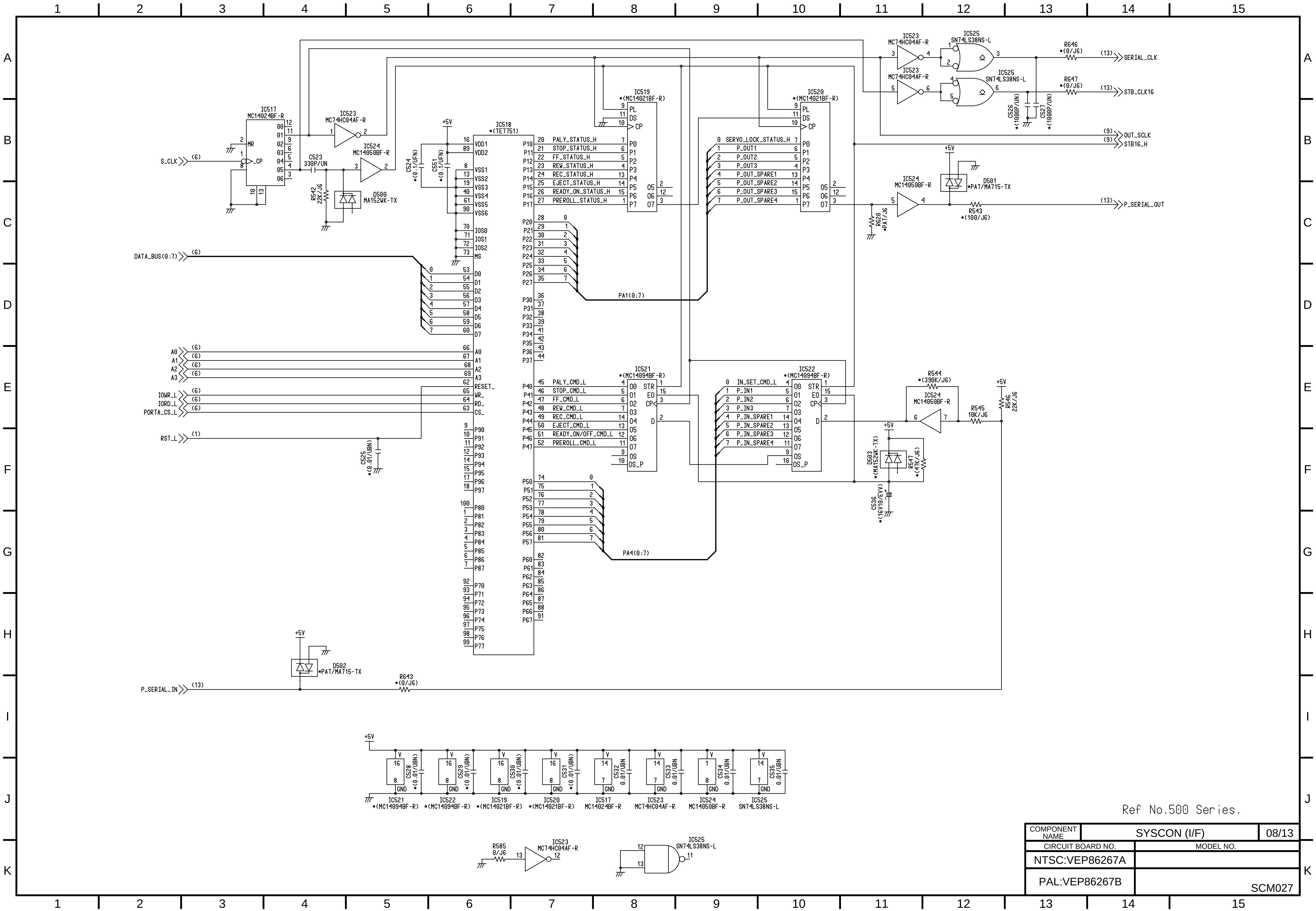
	CROSS	STRAIGHT
R639	0/J6	*PAT
R640	*PAT	0/J6

	CROSS	STRAIGHT
R635	*PAT	0/J6
R636	0/J6	*PAT

*PAT=PATTERN ONLY

Ref No.500 Series.

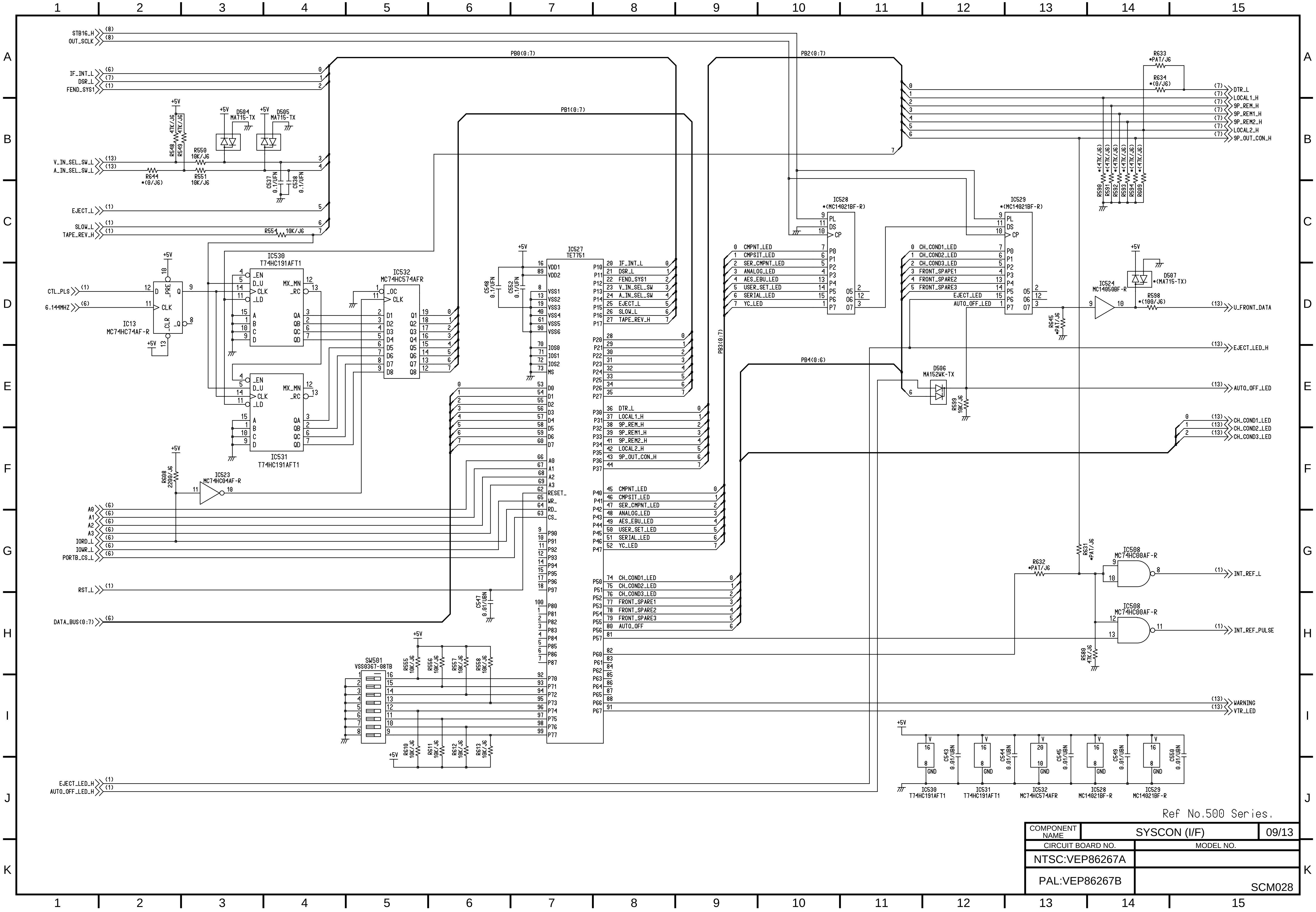
COMPONENT NAME	SYSCON (I/F)	07/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM026	



IC517
MC14024BF-R
IC518
*(TE7751)
IC519
*(MC14021BF-R)
IC520
*(MC14021BF-R)
IC521
*(MC14094BF-R)
IC522
*(MC14094BF-R)
IC523
MC74HC04AF-R
IC524
MC14050BF-R
IC525
SN74LS38NS-L
S_CLK
DATA_BUS(0:7)
A0
A1
A2
A3
IOWR_L
IORD_L
PORTA_CS_L
RST_L
P_SERIAL_IN
SERIAL_CLK
STB_CLK16
OUT_SCLK
STB16_H
P_SERIAL_OUT
PALY_STATUS_H
STOP_STATUS_H
FF_STATUS_H
REW_STATUS_H
REC_STATUS_H
EJECT_STATUS_H
READY_ON_STATUS_H
PREROLL_STATUS_H
SERVO_LOCK_STATUS_H
P_OUT1
P_OUT2
P_OUT3
P_OUT_SPARE1
P_OUT_SPARE2
P_OUT_SPARE3
P_OUT_SPARE4
PALY_CMD_L
STOP_CMD_L
FF_CMD_L
REW_CMD_L
REC_CMD_L
EJECT_CMD_L
READY_ON/OFF_CMD_L
PREROLL_CMD_L
IN_SET_CMD_L
P_IN1
P_IN2
P_IN3
P_IN_SPARE1
P_IN_SPARE2
P_IN_SPARE3
P_IN_SPARE4
PA1(0:7)
PA4(0:7)
C523 330P/UN
R542 22K/J6
D500 MA152WK-TX
D501 *PAT/MA715-TX
D502 *PAT/MA715-TX
D503 *(MA152WK-TX)
C524 *(0.1/UFN)
C551 *(0.1/UFN)
C525 *(0.01/UBN)
C526 *(1000P/UN)
C527 *(1000P/UN)
C536 *(16V10/EVV)
R646 *(0/J6)
R647 *(0/J6)
R543 *(100/J6)
R620 *PAT/J6
R544 *(390K/J6)
R545 10K/J6
R546 22K/J6
R547 *(47K/J6)
R643 *(0/J6)
R585 0/J6
+5V
C528 *(0.01/UBN)
C529 *(0.01/UBN)
C530 *(0.01/UBN)
C531 *(0.01/UBN)
C532 0.01/UBN
C533 0.01/UBN
C534 0.01/UBN
C535 0.01/UBN
IC521 *(MC14094BF-R)
IC522 *(MC14094BF-R)
IC519 *(MC14021BF-R)
IC520 *(MC14021BF-R)
IC517 MC14024BF-R
IC523 MC74HC04AF-R
IC524 MC14050BF-R
IC525 SN74LS38NS-L

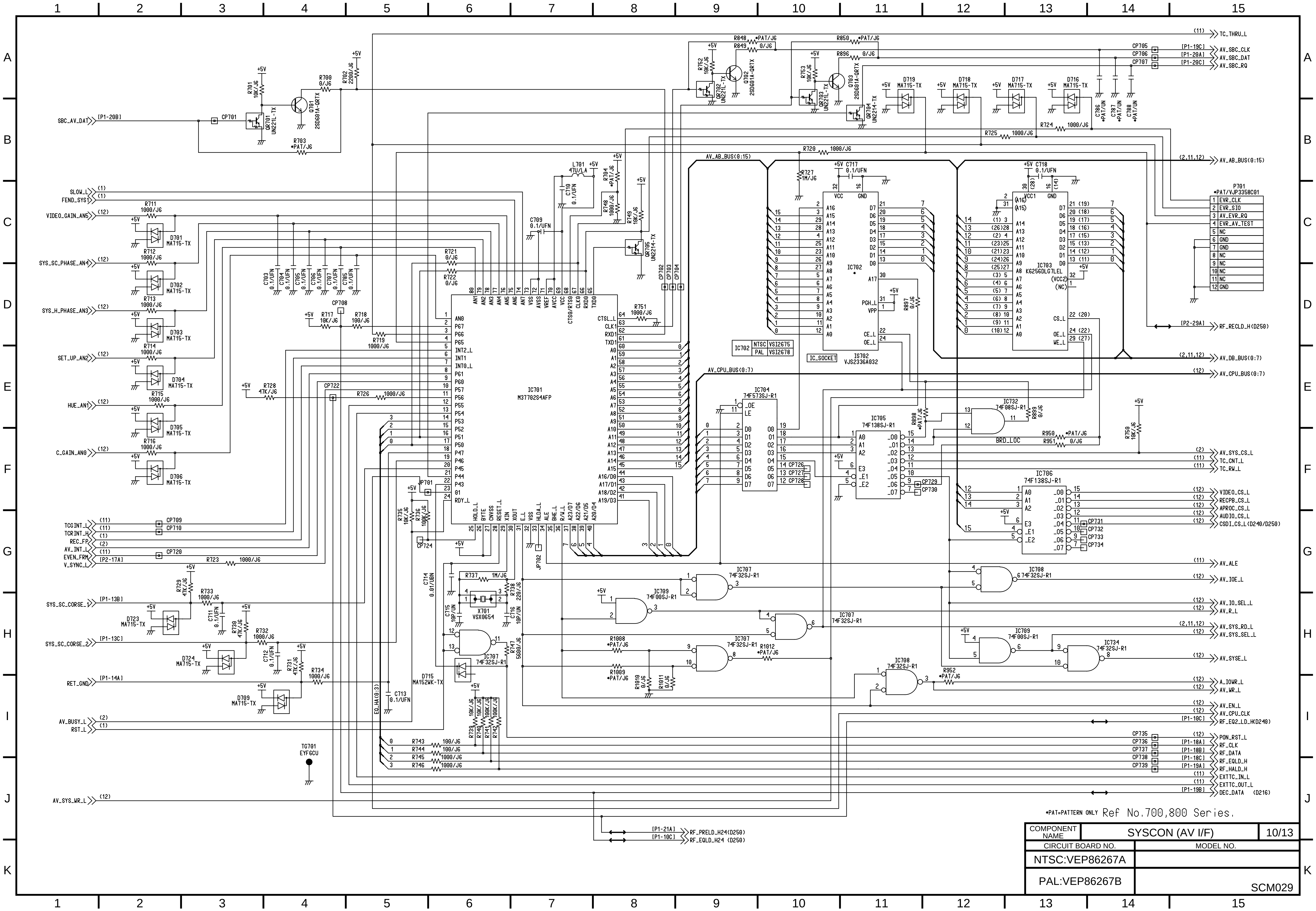
Ref No.500 Series.

COMPONENT NAME	SYSCON (I/F)	08/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM027	


STB16_H
OUT_SCLK
IF_INT_L
DSR_L
FEND_SYS1
V_IN_SEL_SW_L
A_IN_SEL_SW_L
EJECT_L
SLOW_L
TAPE_REV_H
CTL_PLS
6.144MHZ
A0
A1
A2
A3
IORD_L
IOWR_L
PORTB_CS_L
RST_L
DATA_BUS(0:7)
EJECT_LED_H
AUTO_OFF_LED_H
PB0(0:7)
PB1(0:7)
PB2(0:7)
PB3(0:7)
PB4(0:6)
D504 MA715-TX
D505 MA715-TX
R548 47K/J6
R549 47K/J6
R550 10K/J6
R551 10K/J6
R644 *(0/J6)
C537 0.1/UFN
C538 0.1/UFN
R554 10K/J6
IC13 MC74HC74AF-R
IC530 T74HC191AFT1
IC531 T74HC191AFT1
IC532 MC74HC574AFR
IC523 MC74HC04AF-R
R608 2200/J6
IC527 TE7751
C548 0.1/UFN
C552 0.1/UFN
C547 0.01/UBN
SW501 VSS0367-08TB
R555 10K/J6
R556 10K/J6
R557 10K/J6
R558 10K/J6
R610 10K/J6
R611 10K/J6
R612 10K/J6
R613 10K/J6
IC528 *(MC14021BF-R)
IC529 *(MC14021BF-R)
CMPNT_LED
CMPSIT_LED
SER_CMPNT_LED
ANALOG_LED
AES_EBU_LED
USER_SET_LED
SERIAL_LED
YC_LED
CH_COND1_LED
CH_COND2_LED
CH_COND3_LED
FRONT_SPARE1
FRONT_SPARE2
FRONT_SPARE3
AUTO_OFF_LED
R633 *PAT/J6
R634 *(0/J6)
DTR_L
LOCAL1_H
9P_REM_H
9P_REM1_H
9P_REM2_H
LOCAL2_H
9P_OUT_CON_H
R590 *(47K/J6)
R591 *(47K/J6)
R592 *(47K/J6)
R593 *(47K/J6)
R594 *(47K/J6)
R589 *(47K/J6)
D507 *(MA715-TX)
IC524 MC14050BF-R
R598 *(100/J6)
R645 *PAT/J6
U_FRONT_DATA
EJECT_LED_H
D506 MA152WK-TX
R599 10K/J6
AUTO_OFF_LED
CH_COND1_LED
CH_COND2_LED
CH_COND3_LED
R631 *PAT/J6
R632 *PAT/J6
IC508 MC74HC00AF-R
INT_REF_L
INT_REF_PULSE
R580 47K/J6
WARNING
VTR_LED
C543 0.01/UBN
C544 0.01/UBN
C545 0.01/UBN
C549 0.01/UBN
C550 0.01/UBN
IC530 T74HC191AFT1
IC531 T74HC191AFT1
IC532 MC74HC574AFR
IC528 MC14021BF-R
IC529 MC14021BF-R
+5V
GND

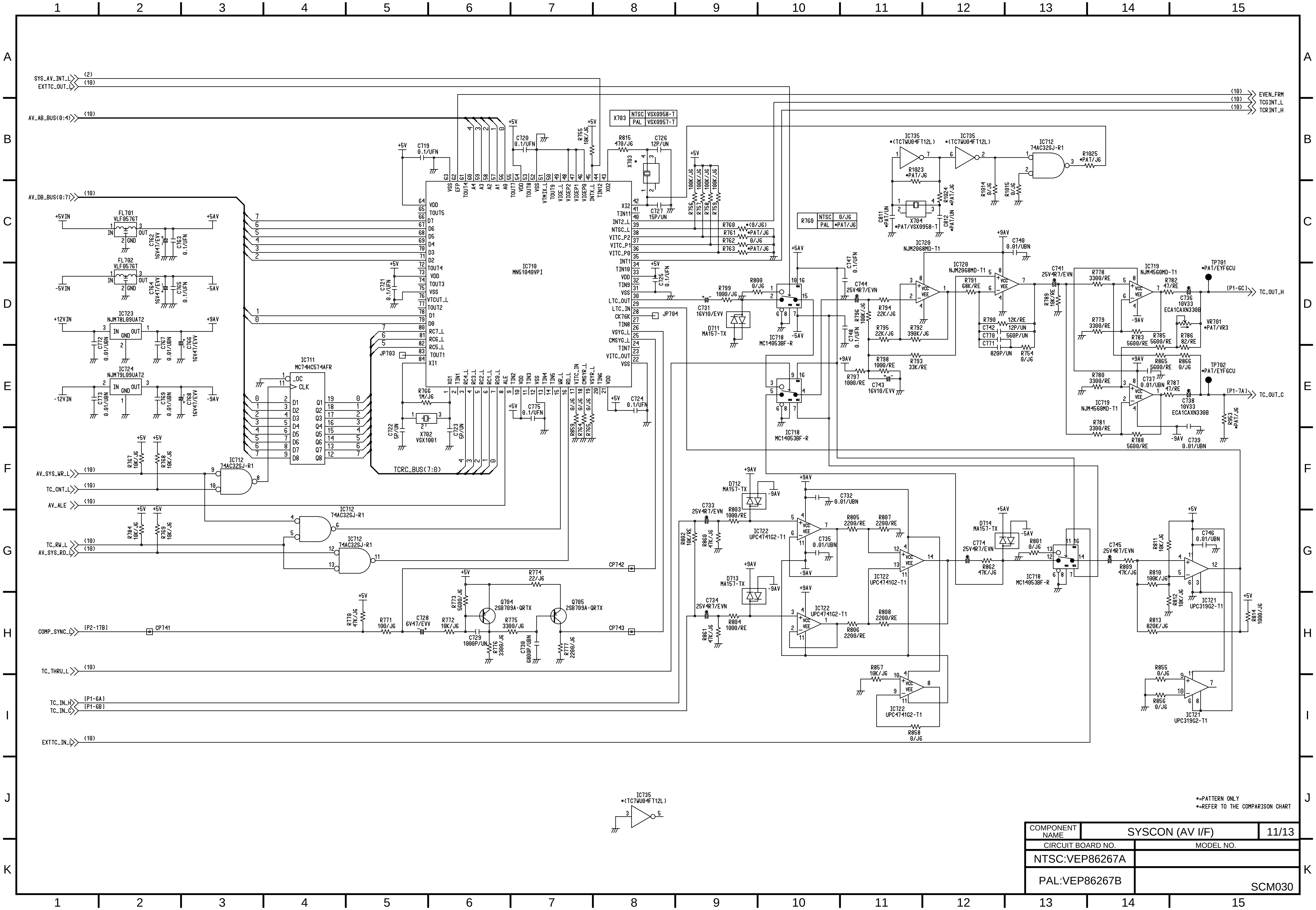
Ref No.500 Series.

COMPONENT NAME	SYSCON (I/F)	09/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM028	


IC701 M37702S4AFP
IC702 VJS2336A032
IC702 NTSC VSI2675 / PAL VSI2678
IC_SOCKET
IC703 K6256DLG7LEL
IC704 74F573SJ-R1
IC705 74F138SJ-R1
IC706 74F138SJ-R1
IC707 74F32SJ-R1
IC708 74F32SJ-R1
IC709 74F08SJ-R1
IC732 74F08SJ-R1
IC734 74F32SJ-R1
P701 *PAT/VJP3358C01
1 EVR_CLK
2 EVR_SIO
3 AV_EVR_RQ
4 EVR_AV_TEST
5 NC
6 GND
7 GND
8 NC
9 NC
10 NC
11 NC
12 GND
X701 VSX0654
TG701 EYF6CU
L701 47U/LA
QR701 UN221L-TX
Q701 2SD601A-QRTX
QR702 UN221L-TX
Q702 2SD601A-QRTX
QR703 UN221L-TX
Q703 2SD601A-QRTX
QR704 UN2214-TX
QR705 UN2214-TX
D701 MA715-TX
D702 MA715-TX
D703 MA715-TX
D704 MA715-TX
D705 MA715-TX
D706 MA715-TX
D709 MA715-TX
D715 MA152WK-TX
D716 MA715-TX
D717 MA715-TX
D718 MA715-TX
D719 MA715-TX
D723 MA715-TX
D724 MA715-TX
SBC_AV_DAT [P1-20B]
SLOW_L (1)
FEND_SYS (1)
VIDEO_GAIN_AN5 (12)
SYS_SC_PHASE_AN4 (12)
SYS_H_PHASE_AN3 (12)
SET_UP_AN2 (12)
HUE_AN1 (12)
C_GAIN_AN0 (12)
TCGINT_L (11)
TCRINT_H (11)
REC_FP (1)
AV_INT_L (2)
EVEN_FRM (11)
V_SYNC_L [P2-17A]
SYS_SC_CORSE_1 [P1-13B]
SYS_SC_CORSE_2 [P1-13C]
RET_GND [P1-14A]
AV_BUSY_L (2)
RST_L (1)
AV_SYS_WR_L (12)
(11) TC_THRU_L
[P1-19C] AV_SBC_CLK
[P1-20A] AV_SBC_DAT
[P1-20C] AV_SBC_RQ
(2,11,12) AV_AB_BUS(0:15)
[P2-29A] RF_RECLD_H(D250)
(2,11,12) AV_DB_BUS(0:7)
(12) AV_CPU_BUS(0:7)
(2) AV_SYS_CS_L
(11) TC_CNT_L
(11) TC_RW_L
(12) VIDEO_CS_L
(12) RECPB_CS_L
(12) APROC_CS_L
(12) AUDIO_CS_L
(12) CSDI_CS_L(D240/D250)
(11) AV_ALE
(12) AV_IOE_L
(12) AV_IO_SEL_L
(12) AV_R_L
(2,11,12) AV_SYS_RD_L
(12) AV_SYS_SEL_L
(12) AV_SYSE_L
(12) A_IOWR_L
(12) AV_WR_L
(12) AV_EN_L
(12) AV_CPU_CLK
[P1-10C] RF_EQ2_LD_HKD240
(12) PON_RST_L
[P1-18A] RF_CLK
[P1-18B] RF_DATA
[P1-18C] RF_EQLD_H
[P1-19A] RF_HALD_H
(11) EXTTC_IN_L
(11) EXTTC_OUT_L
[P1-19B] DEC_DATA (D216)
[P1-21A] RF_PRELD_H24(D250)
[P1-10C] RF_EQLD_H24 (D250)
AV_AB_BUS(0:15)
AV_CPU_BUS(0:7)
EQ_HA(0:3)
BRD_LOC
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

*PAT=PATTERN ONLY Ref No.700,800 Series.

COMPONENT NAME	SYSCON (AV I/F)	10/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM029	

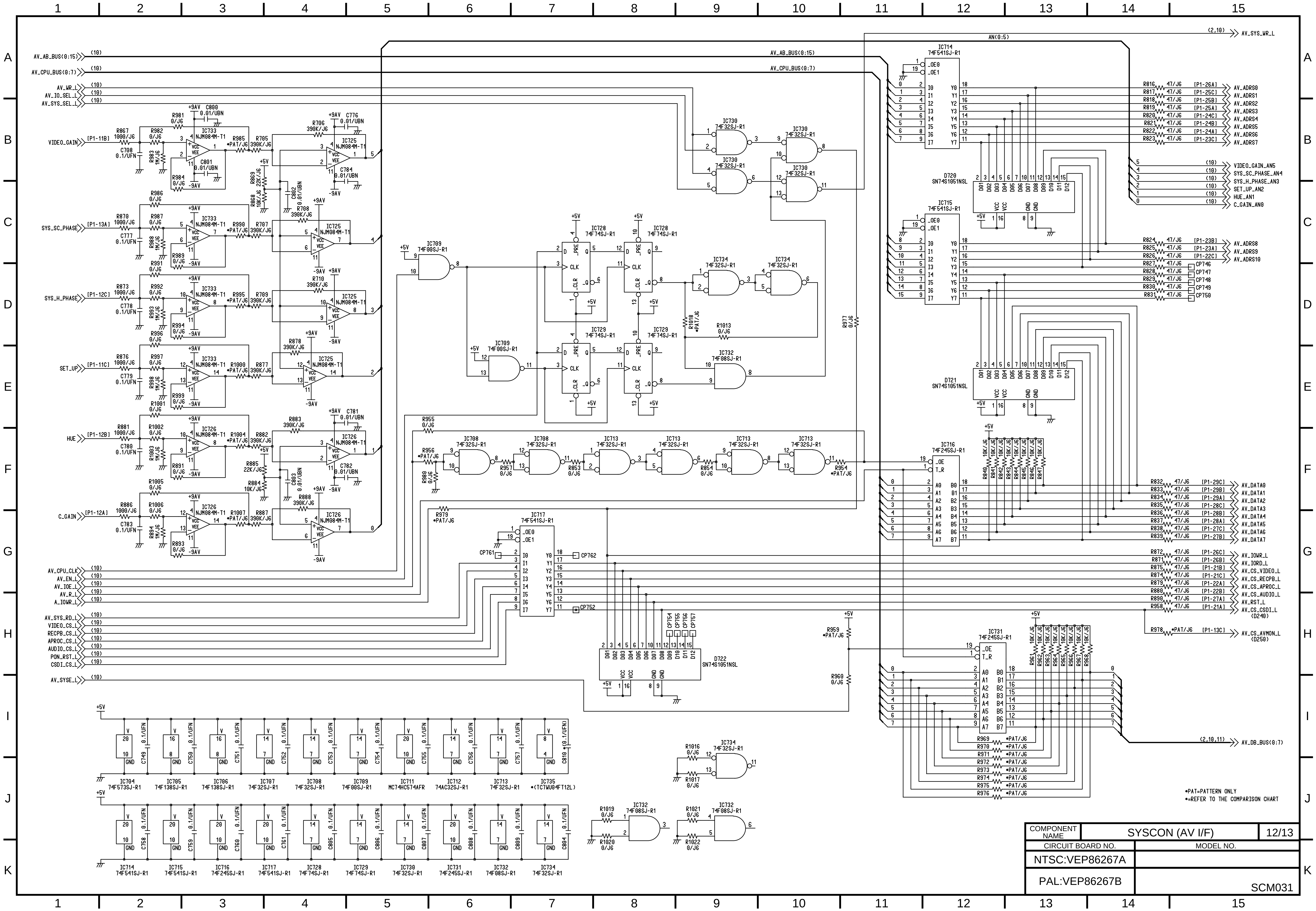

SYS_AV_INT_L
EXTTC_OUT_L
AV_AB_BUS(0:4)
AV_DB_BUS(0:7)
EVEN_FRM
TCCINT_L
TCRINT_H
IC719 MN5104GVPI
IC711 MC74HC574AFR
IC712 74AC32SJ-R1
IC735 *(TC7WU04FT12L)
IC720 NJM2068MD-T1
IC718 MC14053BF-R
IC719 NJM4560MD-T1
IC722 UPC4741G2-T1
IC721 UPC319G2-T1
IC723 NJM78L09UA2
IC724 NJM79L09UAT2
FL701 VLF0576T
FL702 VLF0576T
X702 VSX1001
X703
X704 *PAT/VSX0958-T
Q704 2SB709A-QRTX
Q705 2SB709A-QRTX
D711 MA157-TX
D712 MA157-TX
D713 MA157-TX
D714 MA157-TX
TP701 *PAT/EYF6CU
TP702 *PAT/EYF6CU
VR701 *PAT/VR3
+5VIN
-5VIN
+12VIN
-12VIN
+5AV
-5AV
+9AV
-9AV
AV_SYS_WR_L
TC_CNT_L
AV_ALE
TC_RW_L
AV_SYS_RD_L
COMP_SYNC_L
TC_THRU_L
TC_IN_H
TC_IN_C
EXTTC_IN_L
TC_OUT_H
TC_OUT_C
TCRC_BUS(7:0)
CP741
CP742
CP743
JP703
JP704

X703		
	NTSC	VSX0958-T
	PAL	VSX0957-T

R760		
	NTSC	0/J6
	PAL	*PAT/J6

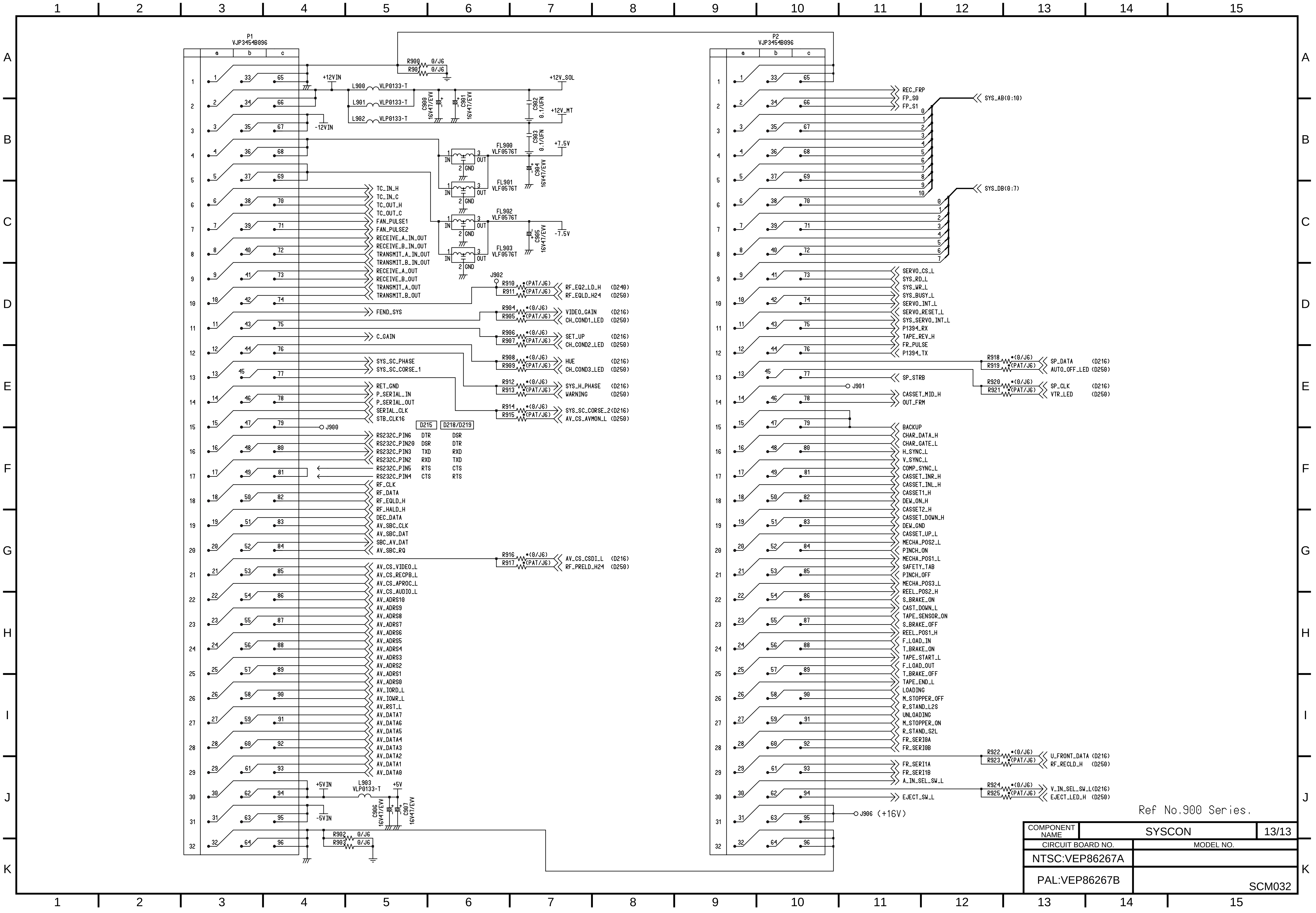
*=PATTERN ONLY
*=REFER TO THE COMPARISON CHART

COMPONENT NAME	SYSCON (AV I/F)	11/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM030	


AV_AB_BUS(0:15)
AV_CPU_BUS(0:7)
AV_WR_L
AV_IO_SEL_L
AV_SYS_SEL_L
VIDEO_GAIN
SYS_SC_PHASE
SYS_H_PHASE
SET_UP
HUE
C_GAIN
AV_CPU_CLK
AV_EN_L
AV_IOE_L
AV_R_L
A_IOWR_L
AV_SYS_RD_L
VIDEO_CS_L
RECPB_CS_L
APROC_CS_L
AUDIO_CS_L
PON_RST_L
CSDI_CS_L
AV_SYSE_L
AV_SYS_WR_L
AN(0:5)
AV_ADRS0
AV_ADRS1
AV_ADRS2
AV_ADRS3
AV_ADRS4
AV_ADRS5
AV_ADRS6
AV_ADRS7
VIDEO_GAIN_AN5
SYS_SC_PHASE_AN4
SYS_H_PHASE_AN3
SET_UP_AN2
HUE_AN1
C_GAIN_AN0
AV_ADRS8
AV_ADRS9
AV_ADRS10
CP746
CP747
CP748
CP749
CP750
AV_DATA0
AV_DATA1
AV_DATA2
AV_DATA3
AV_DATA4
AV_DATA5
AV_DATA6
AV_DATA7
AV_IOWR_L
AV_IORD_L
AV_CS_VIDEO_L
AV_CS_RECPB_L
AV_CS_APROC_L
AV_CS_AUDIO_L
AV_RST_L
AV_CS_CSDI_L
(D240)
AV_CS_AVMON_L
(D250)
AV_DB_BUS(0:7)
IC714 74F541SJ-R1
IC715 74F541SJ-R1
IC716 74F245SJ-R1
IC717 74F541SJ-R1
IC731 74F245SJ-R1
IC733 NJM084M-T1
IC725 NJM084M-T1
IC726 NJM084M-T1
IC728 74F74SJ-R1
IC729 74F74SJ-R1
IC730 74F32SJ-R1
IC734 74F32SJ-R1
IC732 74F08SJ-R1
IC709 74F08SJ-R1
IC708 74F32SJ-R1
IC713 74F32SJ-R1
D720 SN74S1051NSL
D721 SN74S1051NSL
D722 SN74S1051NSL
CP761
CP762
CP752
CP754
CP755
CP756
CP757
+5V
+9AV
-9AV
IC704 74F573SJ-R1
IC705 74F138SJ-R1
IC706 74F138SJ-R1
IC707 74F32SJ-R1
IC708 74F32SJ-R1
IC709 74F08SJ-R1
IC711 MC74HC574AFR
IC712 74AC32SJ-R1
IC713 74F32SJ-R1
IC735 *(TC7WU04FT12L)
IC714 74F541SJ-R1
IC715 74F541SJ-R1
IC716 74F245SJ-R1
IC717 74F541SJ-R1
IC728 74F74SJ-R1
IC729 74F74SJ-R1
IC730 74F32SJ-R1
IC731 74F245SJ-R1
IC732 74F08SJ-R1
IC734 74F32SJ-R1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

*PAT=PATTERN ONLY
*=REFER TO THE COMPARISON CHART

COMPONENT NAME	SYSCON (AV I/F)	12/13
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP86267A		
PAL:VEP86267B	SCM031	


P1
VJP3454B096
P2
VJP3454B096
+12VIN
-12VIN
+12V_SOL
+12V_MT
+7.5V
-7.5V
+5VIN
-5VIN
+5V
L900 VLP0133-T
L901 VLP0133-T
L902 VLP0133-T
L903 VLP0133-T
R900 0/J6
R901 0/J6
R902 0/J6
R903 0/J6
C900 16V47/EVV
C901 16V47/EVV
C902 0.1/UFN
C903 0.1/UFN
C904 16V47/EVV
C905 16V47/EVV
C906 16V47/EVV
C907 16V47/EVV
FL900 VLF0576T
FL901 VLF0576T
FL902 VLF0576T
FL903 VLF0576T
IN
OUT
GND
TC_IN_H
TC_IN_C
TC_OUT_H
TC_OUT_C
FAN_PULSE1
FAN_PULSE2
RECEIVE_A_IN_OUT
RECEIVE_B_IN_OUT
TRANSMIT_A_IN_OUT
TRANSMIT_B_IN_OUT
RECEIVE_A_OUT
RECEIVE_B_OUT
TRANSMIT_A_OUT
TRANSMIT_B_OUT
J902
R910 *(PAT/J6) RF_EQ2_LD_H (D240)
R911 *(PAT/J6) RF_EQLD_H24 (D250)
FEND_SYS
R904 *(0/J6) VIDEO_GAIN (D216)
R905 *(PAT/J6) CH_COND1_LED (D250)
C_GAIN
R906 *(0/J6) SET_UP (D216)
R907 *(PAT/J6) CH_COND2_LED (D250)
SYS_SC_PHASE
SYS_SC_CORSE_1
R908 *(0/J6) HUE (D216)
R909 *(PAT/J6) CH_COND3_LED (D250)
RET_GND
P_SERIAL_IN
P_SERIAL_OUT
SERIAL_CLK
STB_CLK16
R912 *(0/J6) SYS_H_PHASE (D216)
R913 *(PAT/J6) WARNING (D250)
R914 *(0/J6) SYS_SC_CORSE_2 (D216)
R915 *(PAT/J6) AV_CS_AVMON_L (D250)
J900
D215 D218/D219
RS232C_PIN6 DTR DSR
RS232C_PIN20 DSR DTR
RS232C_PIN3 TXD RXD
RS232C_PIN2 RXD TXD
RS232C_PIN5 RTS CTS
RS232C_PIN4 CTS RTS
RF_CLK
RF_DATA
RF_EQLD_H
RF_HALD_H
DEC_DATA
AV_SBC_CLK
AV_SBC_DAT
SBC_AV_DAT
AV_SBC_RQ
R916 *(0/J6) AV_CS_CSDI_L (D216)
R917 *(PAT/J6) RF_PRELD_H24 (D250)
AV_CS_VIDEO_L
AV_CS_RECPB_L
AV_CS_APROC_L
AV_CS_AUDIO_L
AV_ADRS10
AV_ADRS9
AV_ADRS8
AV_ADRS7
AV_ADRS6
AV_ADRS5
AV_ADRS4
AV_ADRS3
AV_ADRS2
AV_ADRS1
AV_ADRS0
AV_IORD_L
AV_IOWR_L
AV_RST_L
AV_DATA7
AV_DATA6
AV_DATA5
AV_DATA4
AV_DATA3
AV_DATA2
AV_DATA1
AV_DATA0
REC_FRP
FP_S0
FP_S1
SYS_AB(0:10)
SYS_DB(0:7)
SERVO_CS_L
SYS_RD_L
SYS_WR_L
SYS_BUSY_L
SERVO_INT_L
SERVO_RESET_L
SYS_SERVO_INT_L
P1394_RX
TAPE_REV_H
FR_PULSE
P1394_TX
R918 *(0/J6) SP_DATA (D216)
R919 *(PAT/J6) AUTO_OFF_LED (D250)
SP_STRB
J901
R920 *(0/J6) SP_CLK (D216)
R921 *(PAT/J6) VTR_LED (D250)
CASSET_MID_H
OUT_FRM
BACKUP
CHAR_DATA_H
CHAR_GATE_L
H_SYNC_L
V_SYNC_L
COMP_SYNC_L
CASSET_INR_H
CASSET_INL_H
CASSET1_H
DEW_ON_H
CASSET2_H
CASSET_DOWN_H
DEW_GND
CASSET_UP_L
MECHA_POS2_L
PINCH_ON
MECHA_POS1_L
SAFETY_TAB
PINCH_OFF
MECHA_POS3_L
REEL_POS2_H
S_BRAKE_ON
CAST_DOWN_L
TAPE_SENSOR_ON
S_BRAKE_OFF
REEL_POS1_H
F_LOAD_IN
T_BRAKE_ON
TAPE_START_L
F_LOAD_OUT
T_BRAKE_OFF
TAPE_END_L
LOADING
M_STOPPER_OFF
R_STAND_L2S
UNLOADING
M_STOPPER_ON
R_STAND_S2L
FR_SERI0A
FR_SERI0B
R922 *(0/J6) U_FRONT_DATA (D216)
R923 *(PAT/J6) RF_RECLD_H (D250)
FR_SERI1A
FR_SERI1B
A_IN_SEL_SW_L
R924 *(0/J6) V_IN_SEL_SW_L (D216)
R925 *(PAT/J6) EJECT_LED_H (D250)
EJECT_SW_L
J906 (+16V)

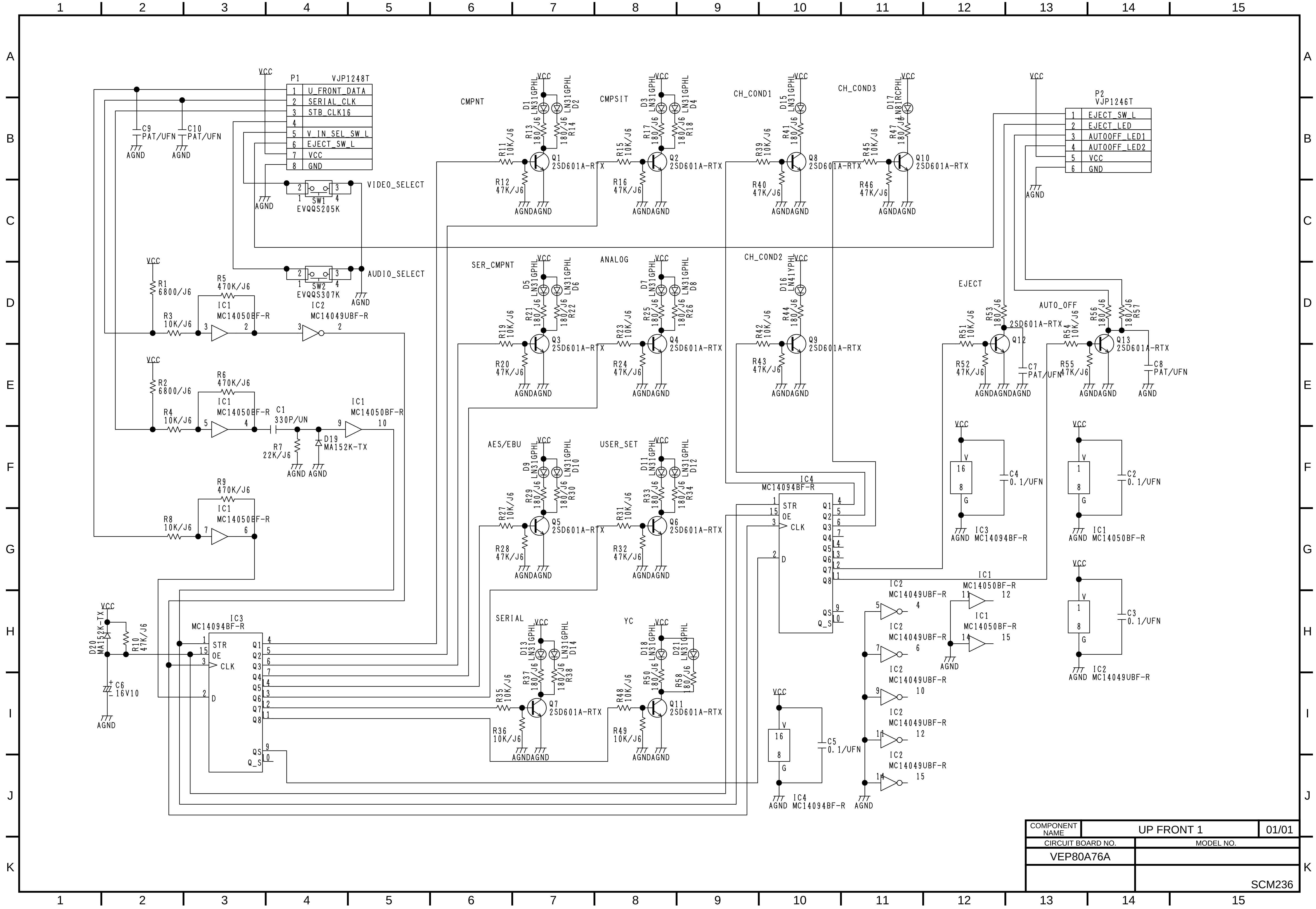
Ref No.900 Series.

COMPONENT NAME: SYSCON 13/13

CIRCUIT BOARD NO.
NTSC:VEP86267A
PAL:VEP86267B

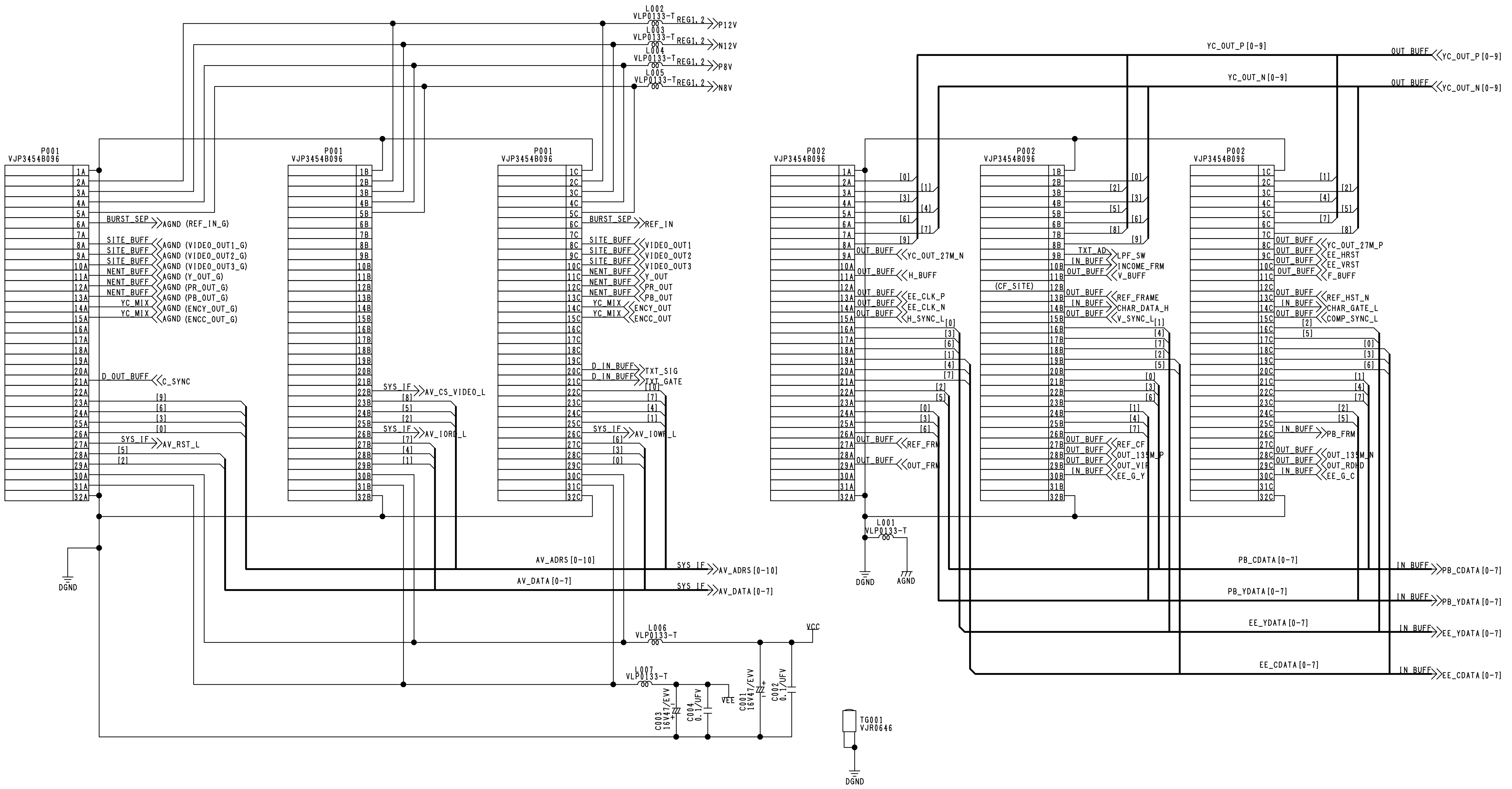
MODEL NO.

SCM032

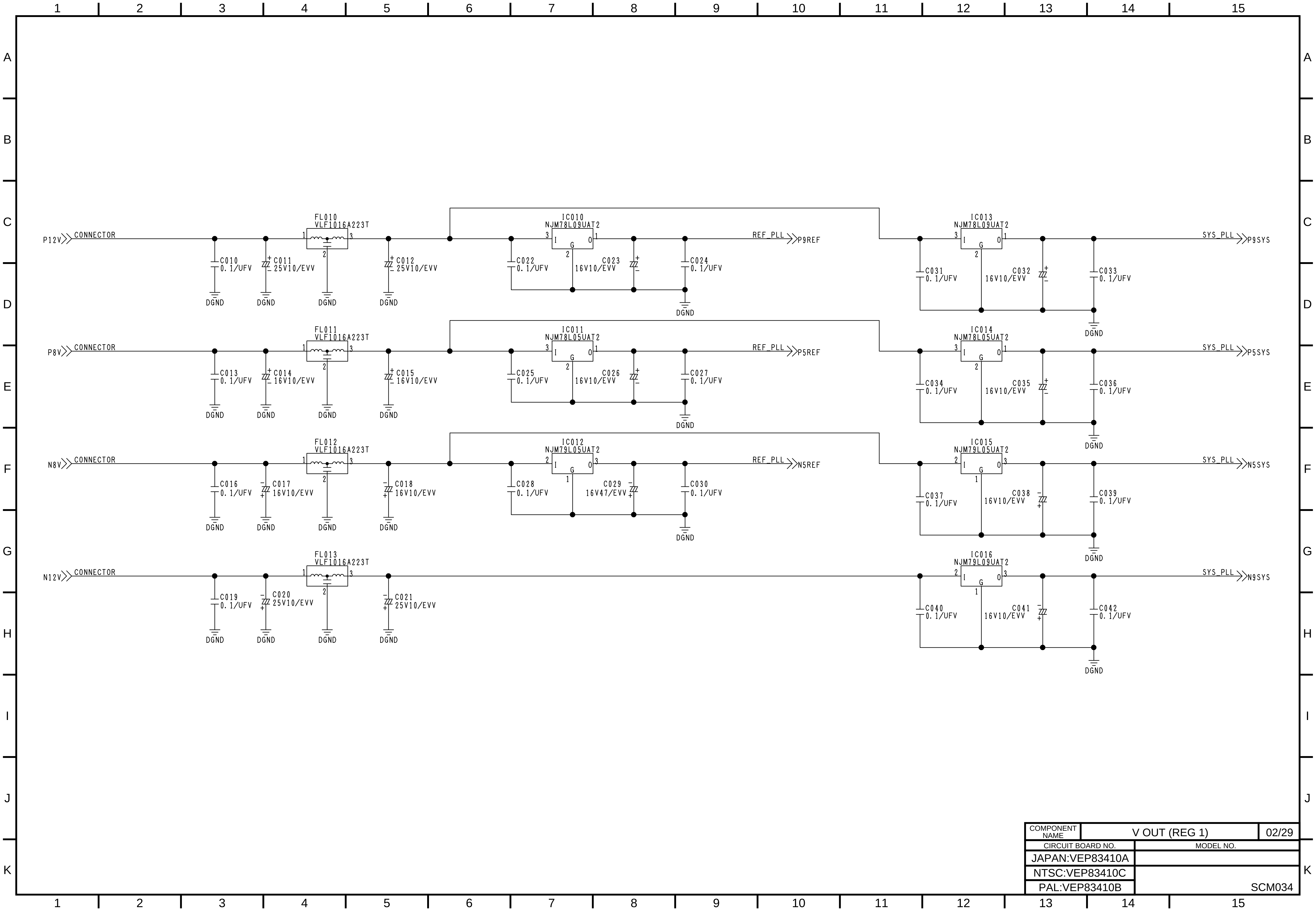


P1 VJP1248T
1 U_FRONT_DATA
2 SERIAL_CLK
3 STB_CLK16
4
5 V_IN_SEL_SW_L
6 EJECT_SW_L
7 VCC
8 GND
C9 PAT/UFN
C10 PAT/UFN
AGND
VCC
VIDEO_SELECT
SW1 EVQQS205K
AUDIO_SELECT
SW2 EVQQS307K
R1 6800/J6
R2 6800/J6
R3 10K/J6
R4 10K/J6
R5 470K/J6
R6 470K/J6
R7 22K/J6
R8 10K/J6
R9 470K/J6
R10 47K/J6
IC1 MC14050BF-R
IC2 MC14049UBF-R
C1 330P/UN
D19 MA152K-TX
D20 MA152K-TX
C6 16V10
IC3 MC14094BF-R
STR OE CLK D Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 QS Q_S
CMPNT
D1 LN31GPHL
D2 LN31GPHL
R11 10K/J6
R12 47K/J6
R13 180/J6
R14 180/J6
Q1 2SD601A-RTX
CMPSIT
D3 LN31GPHL
D4 LN31GPHL
R15 10K/J6
R16 47K/J6
R17 180/J6
R18 180/J6
Q2 2SD601A-RTX
CH_COND1
D15 LN31GPHL
R39 10K/J6
R40 47K/J6
R41 180/J6
Q8 2SD601A-RTX
CH_COND3
D17 LN81RCPHL
R45 10K/J6
R46 47K/J6
R47 180/J6
Q10 2SD601A-RTX
P2 VJP1246T
1 EJECT_SW_L
2 EJECT_LED
3 AUTOOFF_LED1
4 AUTOOFF_LED2
5 VCC
6 GND
SER_CMPNT
D5 LN31GPHL
D6 LN31GPHL
R19 10K/J6
R20 47K/J6
R21 180/J6
R22 180/J6
Q3 2SD601A-RTX
ANALOG
D7 LN31GPHL
D8 LN31GPHL
R23 10K/J6
R24 47K/J6
R25 180/J6
R26 180/J6
Q4 2SD601A-RTX
CH_COND2
D16 LN41YPHL
R42 10K/J6
R43 47K/J6
R44 180/J6
Q9 2SD601A-RTX
EJECT
R51 10K/J6
R52 47K/J6
R53 180/J6
Q12 2SD601A-RTX
C7 PAT/UFN
AUTO_OFF
R54 10K/J6
R55 47K/J6
R56 180/J6
R57 180/J6
Q13 2SD601A-RTX
C8 PAT/UFN
AES/EBU
D9 LN31GPHL
D10 LN31GPHL
R27 10K/J6
R28 47K/J6
R29 180/J6
R30 180/J6
Q5 2SD601A-RTX
USER_SET
D11 LN31GPHL
D12 LN31GPHL
R31 10K/J6
R32 47K/J6
R33 180/J6
R34 180/J6
Q6 2SD601A-RTX
IC4 MC14094BF-R
C4 0.1/UFN
C2 0.1/UFN
C3 0.1/UFN
C5 0.1/UFN
IC3 MC14094BF-R
IC1 MC14050BF-R
IC2 MC14049UBF-R
IC4 MC14094BF-R
SERIAL
D13 LN31GPHL
D14 LN31GPHL
R35 10K/J6
R36 10K/J6
R37 180/J6
R38 180/J6
Q7 2SD601A-RTX
YC
D18 LN31GPHL
D21 LN31GPHL
R48 10K/J6
R49 10K/J6
R50 180/J6
R58 180/J6
Q11 2SD601A-RTX

COMPONENT NAME	UP FRONT 1	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A76A		
	SCM236	

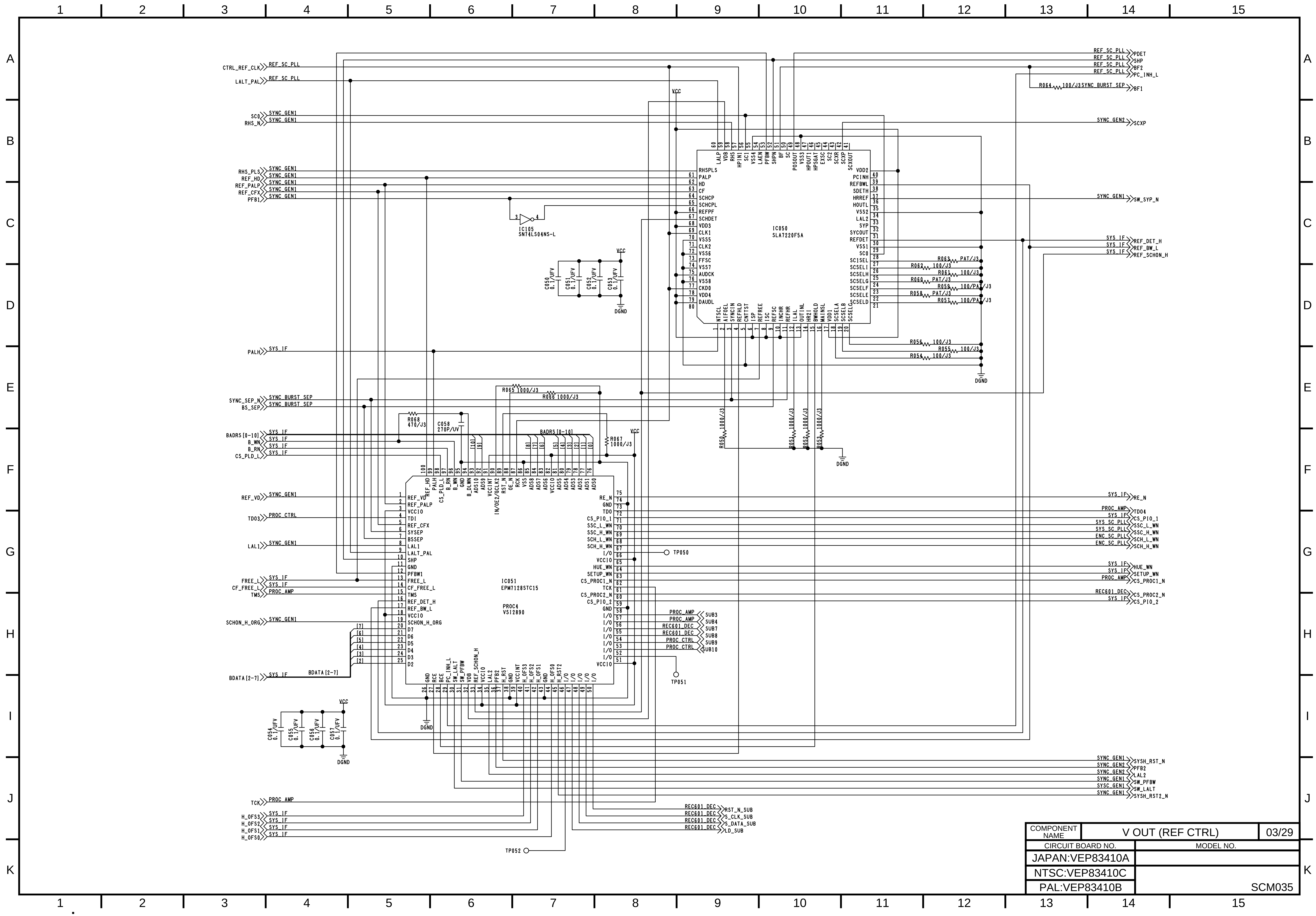

P001
VJP3454B096
P002
L002
L003
L004
L005
VLP0133-T
REG1,2
P12V
N12V
P8V
N8V
BURST_SEP
AGND (REF_IN_G)
SITE_BUFF
AGND (VIDEO_OUT1_G)
AGND (VIDEO_OUT2_G)
AGND (VIDEO_OUT3_G)
NENT_BUFF
AGND (Y_OUT_G)
AGND (PR_OUT_G)
AGND (PB_OUT_G)
YC_MIX
AGND (ENCY_OUT_G)
AGND (ENCC_OUT_G)
D_OUT_BUFF
C_SYNC
SYS_IF
AV_RST_L
AV_CS_VIDEO_L
AV_IORD_L
AV_IOWR_L
REF_IN
VIDEO_OUT1
VIDEO_OUT2
VIDEO_OUT3
Y_OUT
PR_OUT
PB_OUT
ENCY_OUT
ENCC_OUT
D_IN_BUFF
TXT_SIG
TXT_GATE
AV_ADRS[0-10]
AV_DATA[0-7]
DGND
L006
L007
VCC
VEE
C001
16V47/EVV
C002
0.1/UFV
C003
16V47/EVV
C004
0.1/UFV
YC_OUT_P[0-9]
YC_OUT_N[0-9]
OUT_BUFF
YC_OUT_27M_N
H_BUFF
EE_CLK_P
EE_CLK_N
H_SYNC_L
REF_FRM
OUT_FRM
TXT_AD
IN_BUFF
LPF_SW
INCOME_FRM
V_BUFF
(CF_SITE)
REF_FRAME
CHAR_DATA_H
V_SYNC_L
REF_CF
OUT_135M_P
OUT_VIF
EE_G_Y
YC_OUT_27M_P
EE_HRST
EE_VRST
F_BUFF
REF_HST_N
CHAR_GATE_L
COMP_SYNC_L
PB_FRM
OUT_135M_N
OUT_RDRD
EE_G_C
L001
AGND
TG001
VJR0646
PB_CDATA[0-7]
PB_YDATA[0-7]
EE_YDATA[0-7]
EE_CDATA[0-7]

COMPONENT NAME	V OUT (CONNECTOR)	01/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM033	

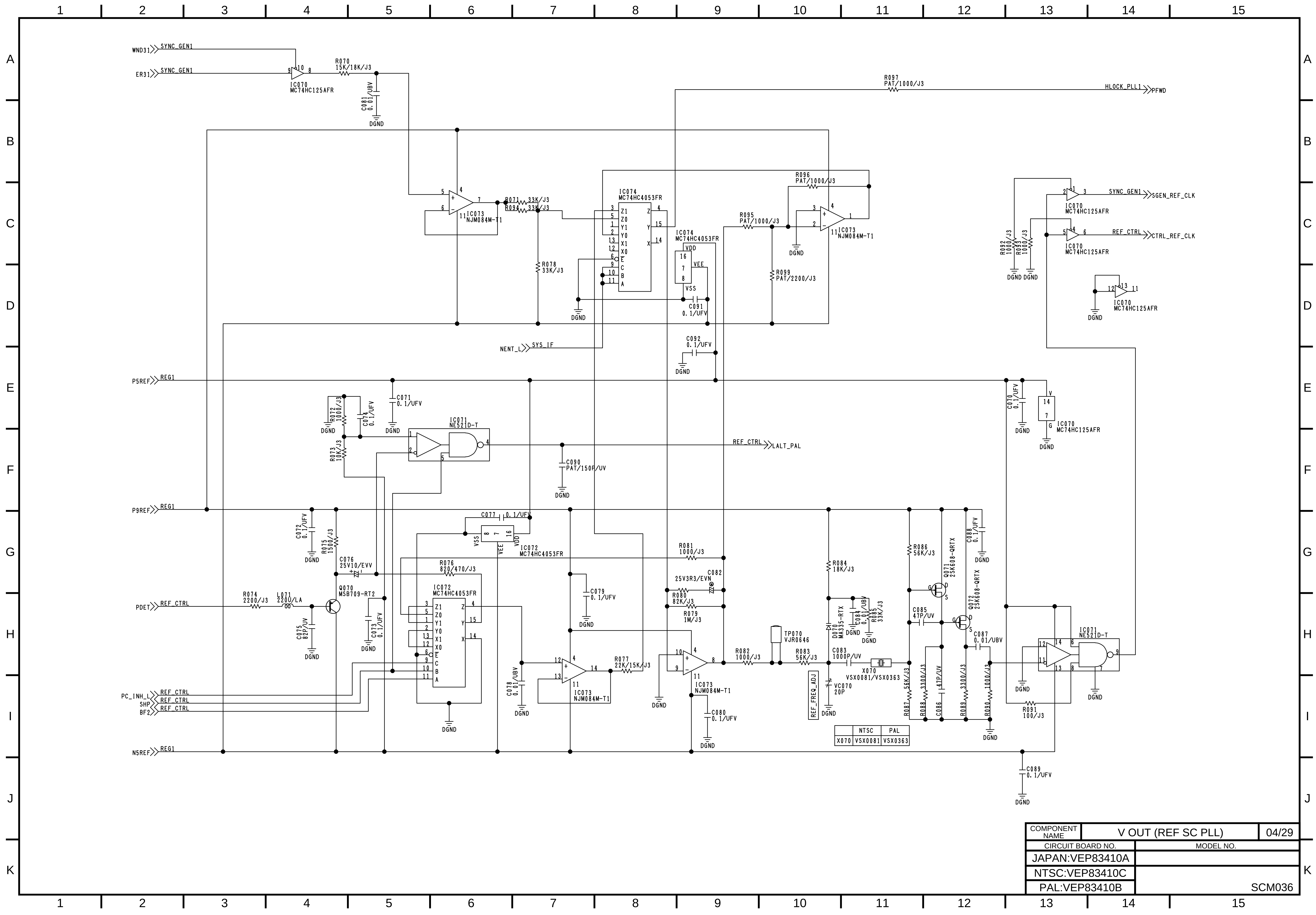

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
P12V
CONNECTOR
C010
0.1/UFV
C011
25V10/EVV
FL010
VLF1016A223T
C012
25V10/EVV
IC010
NJM78L09UAT2
C022
0.1/UFV
C023
16V10/EVV
C024
0.1/UFV
REF_PLL
P9REF
IC013
NJM78L09UAT2
C031
0.1/UFV
C032
16V10/EVV
C033
0.1/UFV
SYS_PLL
P9SYS
P8V
CONNECTOR
C013
0.1/UFV
C014
16V10/EVV
FL011
VLF1016A223T
C015
16V10/EVV
IC011
NJM78L05UAT2
C025
0.1/UFV
C026
16V10/EVV
C027
0.1/UFV
REF_PLL
P5REF
IC014
NJM78L05UAT2
C034
0.1/UFV
C035
16V10/EVV
C036
0.1/UFV
SYS_PLL
P5SYS
N8V
CONNECTOR
C016
0.1/UFV
C017
16V10/EVV
FL012
VLF1016A223T
C018
16V10/EVV
IC012
NJM79L05UAT2
C028
0.1/UFV
C029
16V47/EVV
C030
0.1/UFV
REF_PLL
N5REF
IC015
NJM79L05UAT2
C037
0.1/UFV
C038
16V10/EVV
C039
0.1/UFV
SYS_PLL
N5SYS
N12V
CONNECTOR
C019
0.1/UFV
C020
25V10/EVV
FL013
VLF1016A223T
C021
25V10/EVV
IC016
NJM79L09UAT2
C040
0.1/UFV
C041
16V10/EVV
C042
0.1/UFV
SYS_PLL
N9SYS
DGND

COMPONENT NAME	V OUT (REG 1)	02/29

CIRCUIT BOARD NO.	MODEL NO.
JAPAN:VEP83410A	
NTSC:VEP83410C	
PAL:VEP83410B	SCM034

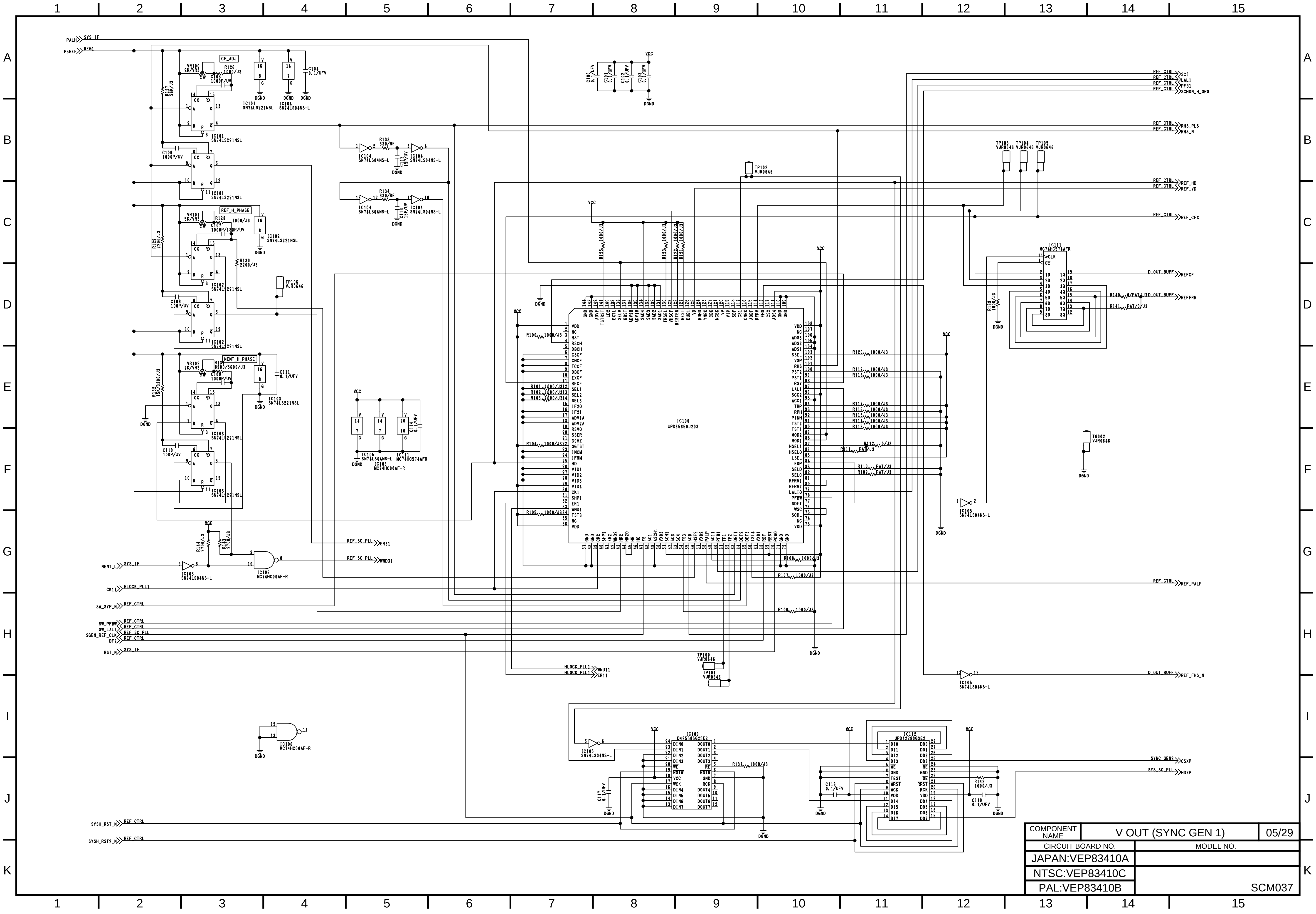

IC050
SLA7220F5A
IC051
EPM7128STC15
PROC4
VS12890
IC105
SN74LS04NS-L
CTRL_REF_CLK
LALT_PAL
SC0
RHS_N
RHS_PLS
REF_HD
REF_PALP
REF_CFX
PFB1
PALH
SYNC_SEP_N
BS_SEP
BADRS[0-10]
B_WN
B_RN
CS_PLD_L
REF_VD
TDO3
LAL1
FREE_L
CF_FREE_L
TMS
SCHON_H_ORG
BDATA[2-7]
TCK
H_OFS3
H_OFS2
H_OFS1
H_OFS0
REF_SC_PLL
SYNC_GEN1
SYNC_GEN2
SYNC_BURST_SEP
SYS_IF
PROC_CTRL
PROC_AMP
REC601_DEC
SYS_SC_PLL
ENC_SC_PLL
PDET
SHP
BF2
PC_INH_L
BF1
SCXP
SW_SYP_N
REF_DET_H
REF_BW_L
REF_SCHON_H
RE_N
TDO4
CS_PIO_1
SSC_L_WN
SSC_H_WN
SCH_L_WN
SCH_H_WN
HUE_WN
SETUP_WN
CS_PROC1_N
CS_PROC2_N
CS_PIO_2
SUB3
SUB4
SUB7
SUB8
SUB9
SUB10
SYSH_RST_N
PFB2
LAL2
SW_PFBW
SW_LALT
SYSH_RST2_N
RST_N_SUB
S_CLK_SUB
S_DATA_SUB
LD_SUB
TP050
TP051
TP052
VCC
DGND
R064 100/J3
R063 PAT/J3
R062 100/J3
R061 100/J3
R060 PAT/J3
R059 100/PAT/J3
R058 PAT/J3
R057 100/PAT/J3
R056 100/J3
R055 100/J3
R054 100/J3
R050 1000/J3
R051 1000/J3
R052 1000/J3
R053 1000/J3
R065 1000/J3
R066 1000/J3
R067 1000/J3
R068 470/J3
C058 270P/UV
C050 0.1/UFV
C051 0.1/UFV
C052 0.1/UFV
C053 0.1/UFV
C054 0.1/UFV
C055 0.1/UFV
C056 0.1/UFV
C057 0.1/UFV
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	V OUT (REF CTRL)	03/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM035	


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
WND31 SYNC_GEN1
ER31 SYNC_GEN1
IC070 MC74HC125AFR
R070 15K/18K/J3
C081 0.01/UBV
DGND
IC073 NJM084M-T1
R071 33K/J3
R094 33K/J3
R078 33K/J3
IC074 MC74HC4053FR
Z1 Z0 Y1 Y0 X1 X0 E C B A Z Y X
VDD VEE VSS
C091 0.1/UFV
C092 0.1/UFV
NENT_L SYS_IF
R097 PAT/1000/J3
HLOCK_PLL1 PFWD
R096 PAT/1000/J3
R095 PAT/1000/J3
R099 PAT/2200/J3
R092 1000/J3
R093 1000/J3
SYNC_GEN1 SGEN_REF_CLK
REF_CTRL CTRL_REF_CLK
P5REF REG1
C071 0.1/UFV
R072 1000/J3
C074 0.1/UFV
R073 10K/J3
IC071 NE521D-T
C090 PAT/150P/UV
REF_CTRL LALT_PAL
C070 0.1/UFV
P9REF REG1
C072 0.1/UFV
R075 1500/J3
C076 25V10/EVV
R076 820/470/J3
C077 0.1/UFV
IC072 MC74HC4053FR
PDET REF_CTRL
R074 2200/J3
L071 220U/LA
Q070 MSB709-RT2
C075 82P/UV
C073 0.1/UFV
C078 0.01/UBV
C079 0.1/UFV
R077 22K/15K/J3
R081 1000/J3
C082 25V3R3/EVN
R080 82K/J3
R079 1M/J3
C080 0.1/UFV
R082 1000/J3
TP070 VJR0646
R083 56K/J3
REF_FREQ_ADJ
R084 18K/J3
D070 MA335-RTX
C084 0.01/UBV
R085 33K/J3
C083 1000P/UV
X070 VSX0081/VSX0363
VC070 20P
R086 56K/J3
Q071 2SK608-QRTX
Q072 2SK608-QRTX
G D S
C085 47P/UV
C088 0.1/UFV
C087 0.01/UBV
R087 56K/J3
R088 3300/J3
C086 47P/UV
R089 3300/J3
R090 1000/J3
R091 100/J3
C089 0.1/UFV
PC_INH_L REF_CTRL
SHP REF_CTRL
BF2 REF_CTRL
N5REF REG1

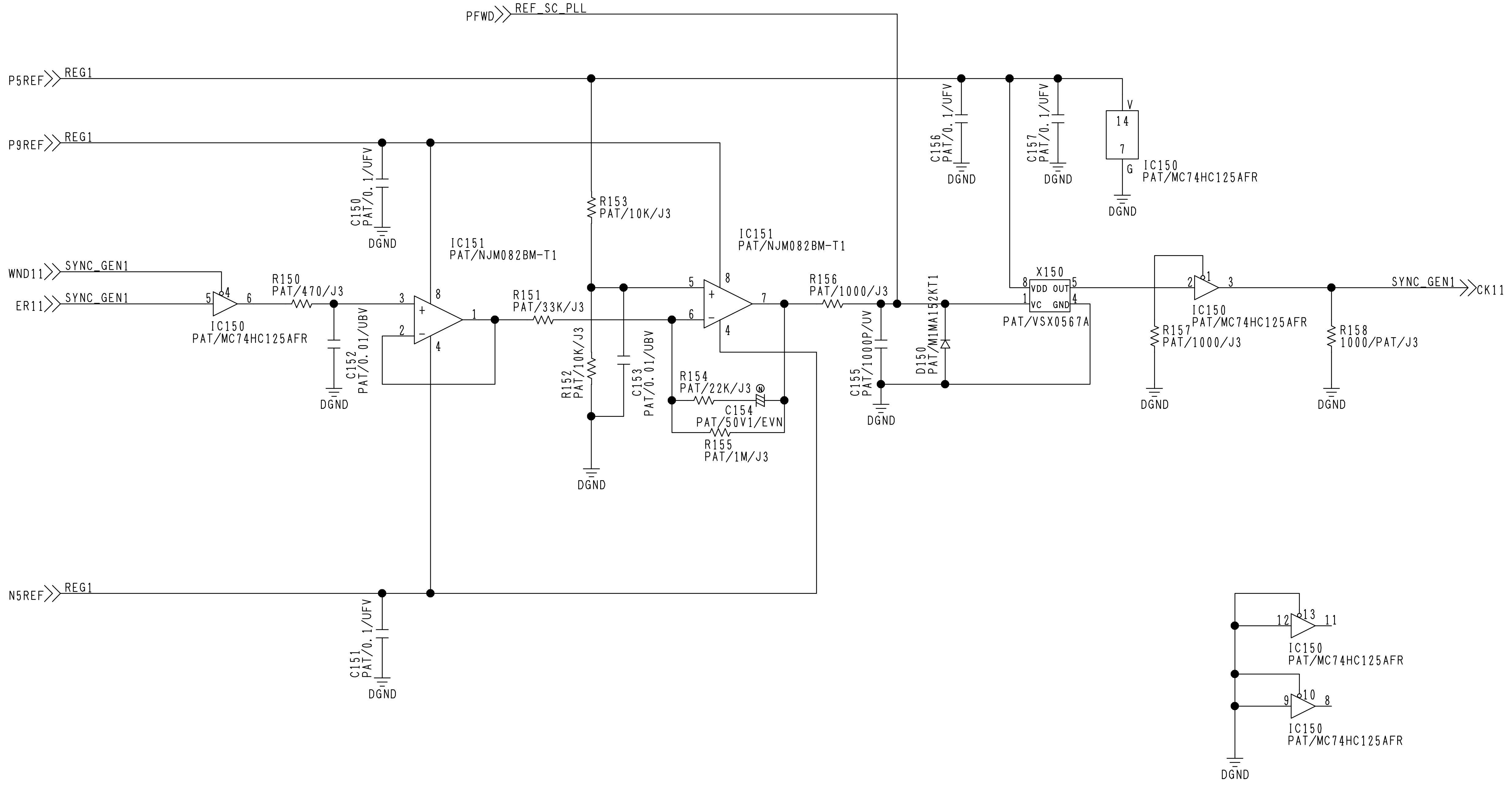
	NTSC	PAL
X070	VSX0081	VSX0363

COMPONENT NAME	V OUT (REF SC PLL)	04/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM036	

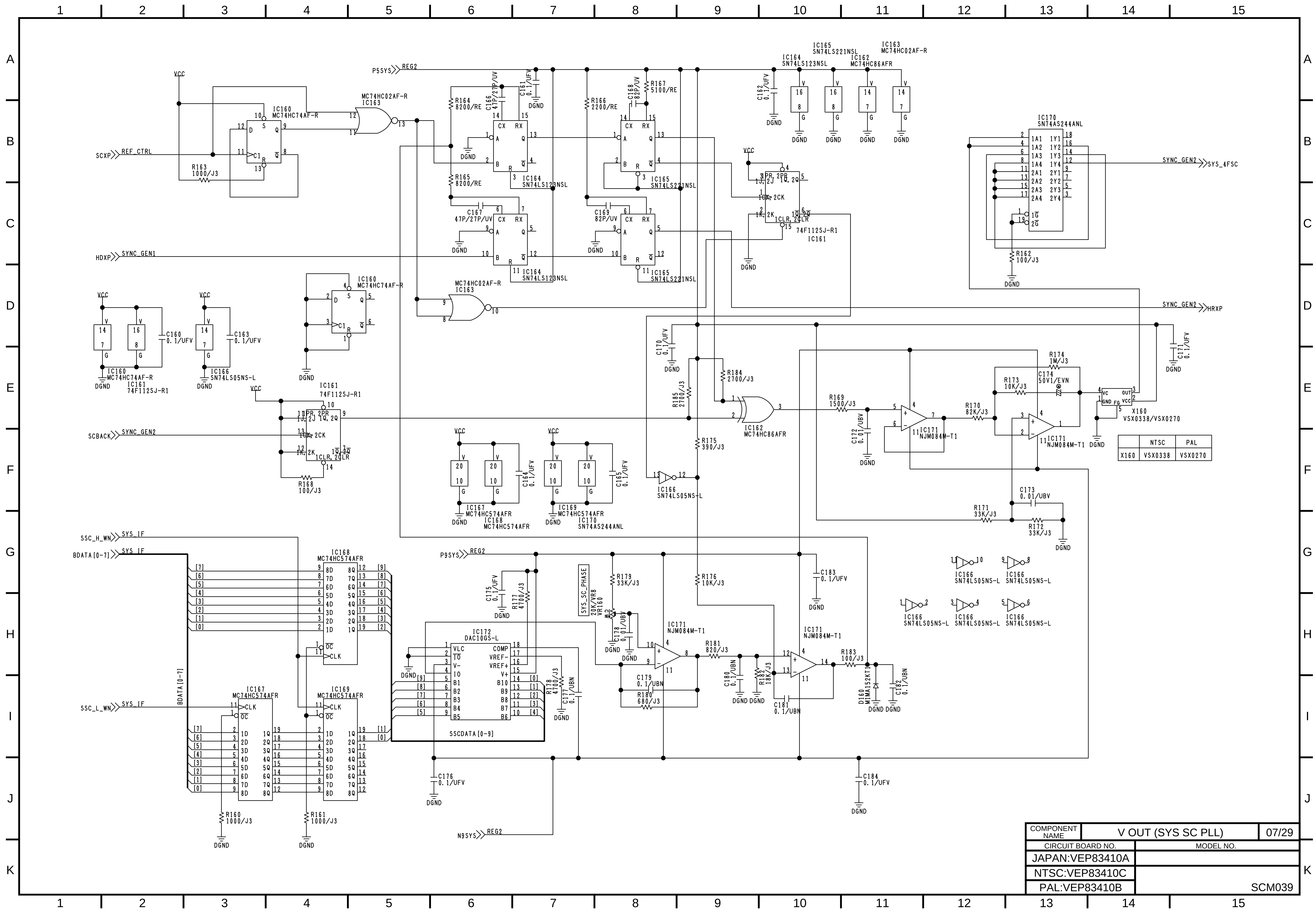


PALH
SYS_IF
P5REF
REG1
CF_ADJ
REF_H_PHASE
NENT_H_PHASE
IC101 SN74LS221NSL
IC102 SN74LS221NSL
IC103 SN74LS221NSL
IC104 SN74LS04NS-L
IC105 SN74LS04NS-L
IC106 MC74HC00AF-R
IC111 MC74HC574AFR
IC100 UPD65650J203
IC109 D485505G25E2
IC112 UPD42280G5E2
VR100 2K/VR3
VR101 5K/VR3
VR102 2K/VR3
TP100 VJR0646
TP101 VJR0646
TP102 VJR0646
TP103 VJR0646
TP104 VJR0646
TP105 VJR0646
TP106 VJR0646
TG002 VJR0646
VCC
DGND
REF_CTRL
SC0
LAL1
PFB1
SCHON_H_ORG
RHS_PLS
RHS_N
REF_HD
REF_VD
REF_CFX
D_OUT_BUFF
REFCF
REFFRM
REF_PALP
REF_FHS_N
REF_SC_PLL
ER31
WND31
NENT_L
CK11
HLOCK_PLL1
SW_SYP_N
SW_PFBN
SW_LALT
SGEN_REF_CLK
BF2
RST_N
WND11
ER11
SYNC_GEN2
CSXP
SYS_SC_PLL
HDXP
SYSH_RST_N
SYSH_RST2_N

COMPONENT NAME	V OUT (SYNC GEN 1)	05/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM037	


PFWD
REF_SC_PLL
P5REF
REG1
P9REF
REG1
C150
PAT/0.1/UFV
DGND
C156
PAT/0.1/UFV
DGND
C157
PAT/0.1/UFV
DGND
V
14
7
G
IC150
PAT/MC74HC125AFR
DGND
R153
PAT/10K/J3
IC151
PAT/NJM082BM-T1
IC151
PAT/NJM082BM-T1
WND11
SYNC_GEN1
ER11
SYNC_GEN1
5
4
6
IC150
PAT/MC74HC125AFR
R150
PAT/470/J3
C152
PAT/0.01/UBV
DGND
3
2
8
4
1
R151
PAT/33K/J3
R152
PAT/10K/J3
DGND
C153
PAT/0.01/UBV
5
6
8
4
7
R154
PAT/22K/J3
N
C154
PAT/50V1/EVN
R155
PAT/1M/J3
R156
PAT/1000/J3
C155
PAT/1000P/UV
DGND
D150
PAT/M1MA152KT1
X150
8
VDD
OUT
5
1
VC
GND
4
PAT/VSX0567A
R157
PAT/1000/J3
DGND
2
1
3
IC150
PAT/MC74HC125AFR
R158
1000/PAT/J3
DGND
SYNC_GEN1
CK11
N5REF
REG1
C151
PAT/0.1/UFV
DGND
12
13
11
IC150
PAT/MC74HC125AFR
9
10
8
IC150
PAT/MC74HC125AFR
DGND

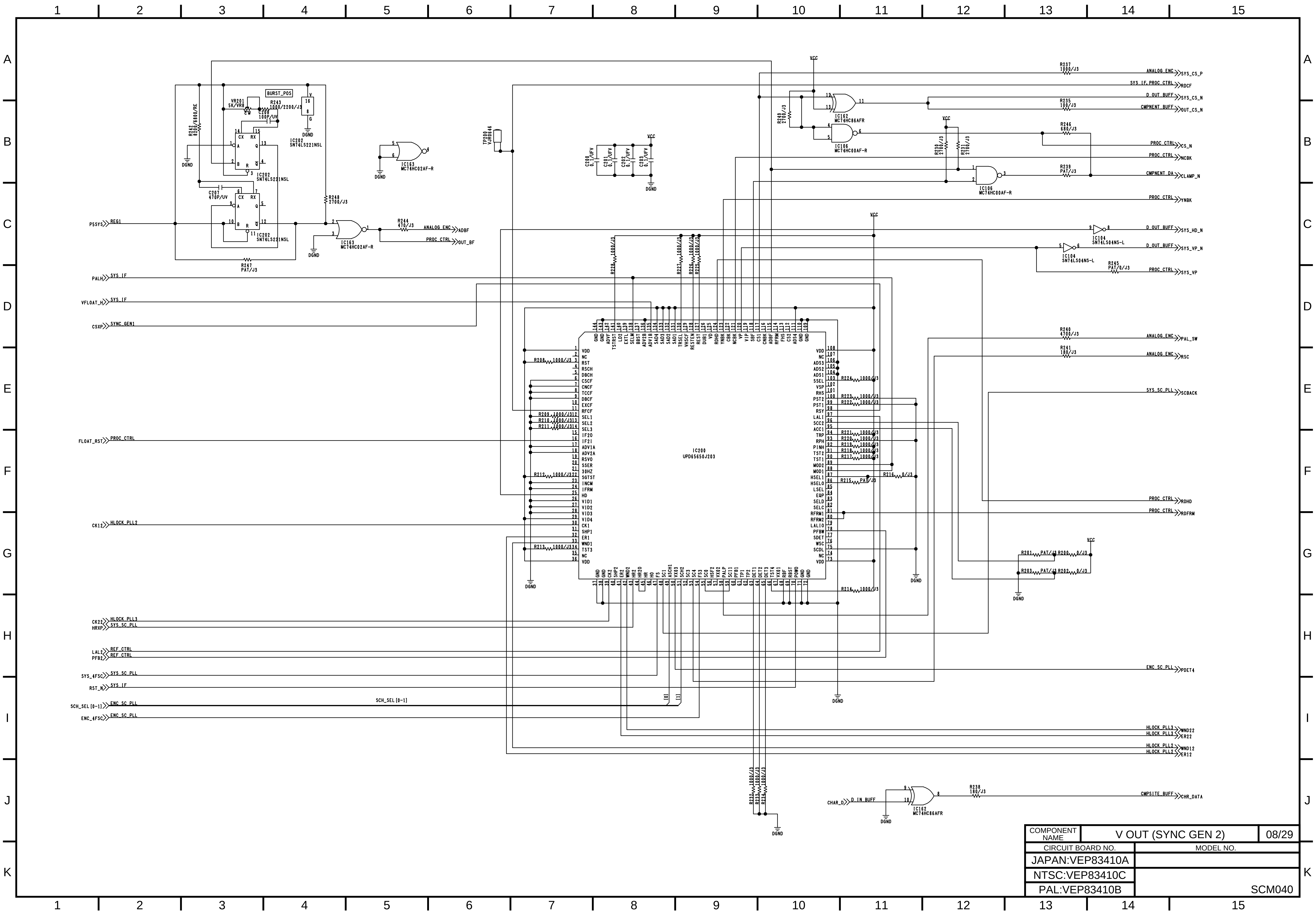
COMPONENT NAME	V OUT (H LOCK PLL)	06/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM038	



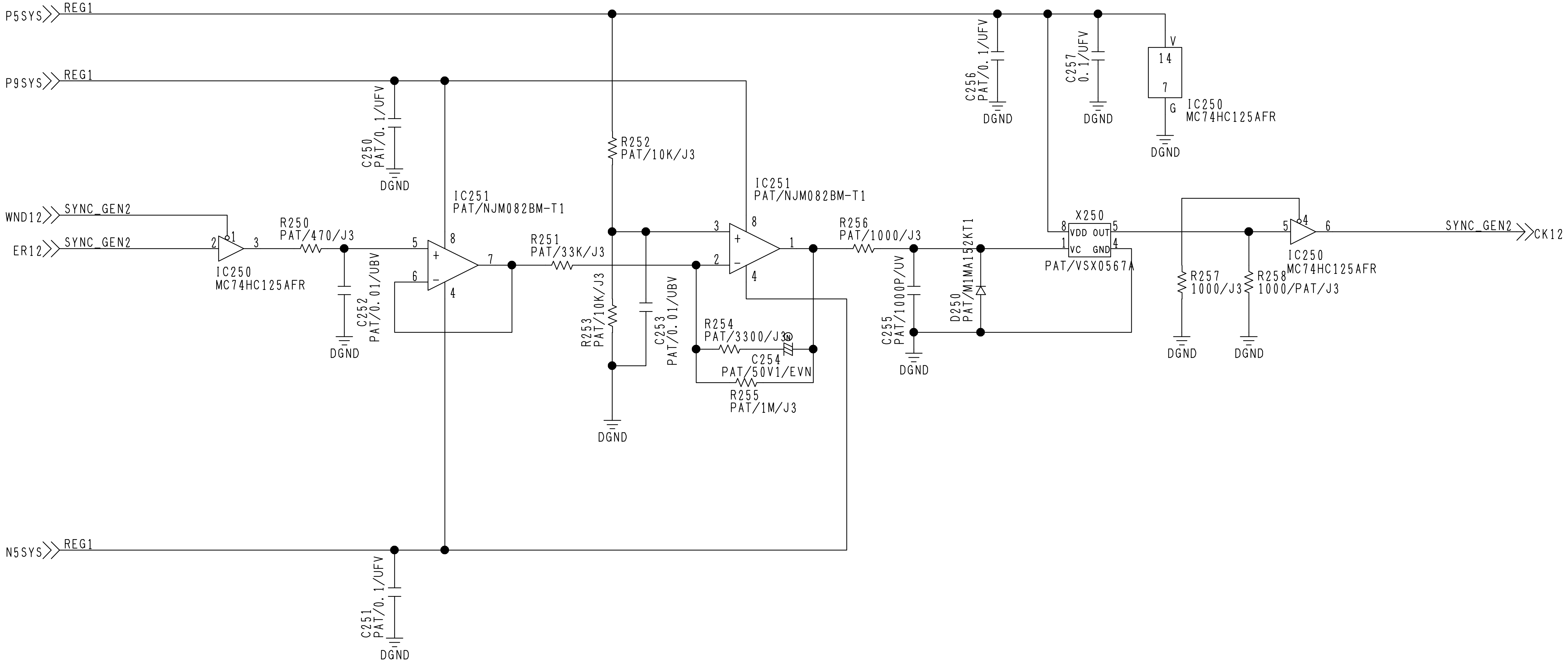
IC160 MC74HC74AF-R
MC74HC02AF-R IC163
SCXP REF_CTRL
R163 1000/J3
P5SYS REG2
R164 8200/RE
R165 8200/RE
C166 47P/27P/UV
C161 0.1/UFV
IC164 SN74LS123NSL
C167 47P/27P/UV
R166 2200/RE
C168 82P/UV
R167 5100/RE
IC165 SN74LS221NSL
C169 82P/UV
C162 0.1/UFV
IC162 MC74HC86AFR
IC161 74F112SJ-R1
IC170 SN74AS244ANL
SYNC_GEN2 SYS_4FSC
R162 100/J3
HDXP SYNC_GEN1
SYNC_GEN2 HRXP
C160 0.1/UFV
C163 0.1/UFV
IC166 SN74LS05NS-L
SCBACK SYNC_GEN2
R168 100/J3
C170 0.1/UFV
C171 0.1/UFV
R184 2700/J3
R185 2700/J3
R169 1500/J3
C172 0.01/UBV
R174 1M/J3
C174 50V1/EVN
R173 10K/J3
R170 82K/J3
IC171 NJM084M-T1
X160 VSX0338/VSX0270
R175 390/J3
C164 0.1/UFV
C165 0.1/UFV
IC167 MC74HC574AFR
IC168 MC74HC574AFR
IC169 MC74HC574AFR
C173 0.01/UBV
R171 33K/J3
R172 33K/J3
SSC_H_WN SYS_IF
BDATA[0-7] SYS_IF
P9SYS REG2
C175 0.1/UFV
R177 4700/J3
SYS_SC_PHASE
VR160 20K/VR8
R179 33K/J3
C183 0.1/UFV
R176 10K/J3
IC172 DAC10GS-L
R178 4700/J3
C177 0.1/UBN
C178 0.01/UBV
C179 0.1/UBN
R180 680/J3
R181 820/J3
C180 0.1/UBN
R182 18K/J3
C181 0.1/UBN
R183 100/J3
D160 MIMA152KT1
C182 0.1/UBN
SSC_L_WN SYS_IF
SSCDATA[0-9]
C176 0.1/UFV
C184 0.1/UFV
R160 1000/J3
R161 1000/J3
N9SYS REG2
DGND
VCC

	NTSC	PAL
X160	VSX0338	VSX0270

COMPONENT NAME	V OUT (SYS SC PLL)	07/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM039	

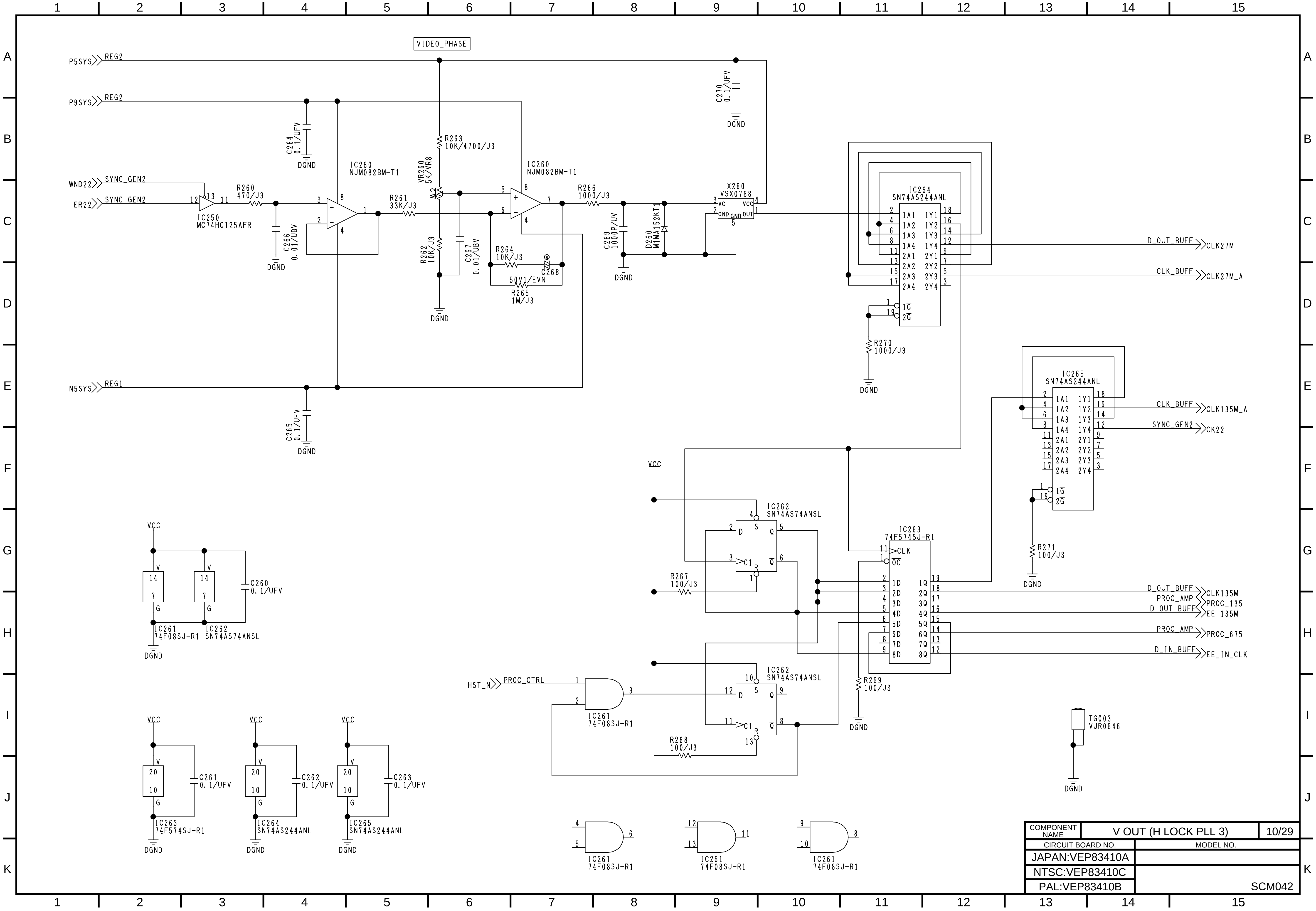

IC200
UPD65650J203
IC162
MC74HC86AFR
IC106
MC74HC00AF-R
IC163
MC74HC02AF-R
IC202
SN74LS221NSL
IC104
SN74LS04NS-L
BURST_POS
VR201
5K/VRB
TP200
VJR0646
VCC
DGND
P5SYS
REG1
PALH
SYS_IF
VFLOAT_H
CSXP
SYNC_GEN1
FLOAT_RST
PROC_CTRL
CK12
HLOCK_PLL2
CK22
HLOCK_PLL3
HRXP
SYS_SC_PLL
LAL2
REF_CTRL
PFB2
SYS_4FSC
RST_N
SCH_SEL[0-1]
ENC_SC_PLL
ENC_4FSC
ANALOG_ENC
SYS_CS_P
SYS_IF_PROC_CTRL
RDCF
D_OUT_BUFF
SYS_CS_N
CMPNENT_BUFF
OUT_CS_N
CS_N
NCBK
CMPNENT_DA
CLAMP_N
YNBK
ADBF
OUT_BF
SYS_HD_N
SYS_VP_N
SYS_VP
PAL_SW
RSC
SYS_SC_PLL
SCBACK
RDHD
RDFRM
PDET4
WND22
ER22
WND12
ER12
CHAR_D
D_IN_BUFF
CMPSITE_BUFF
CHR_DATA
R237 1000/J3
R235 100/J3
R246 680/J3
R239 PAT/J3
R245 PAT/0/J3
R240 4700/J3
R241 180/J3
R238 180/J3
R244 470/J3
R247 PAT/J3
R248 2700/J3
R243 1000/2200/J3
C207 470P/UV
C206 100P/UV

COMPONENT NAME	V OUT (SYNC GEN 2)	08/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM040	

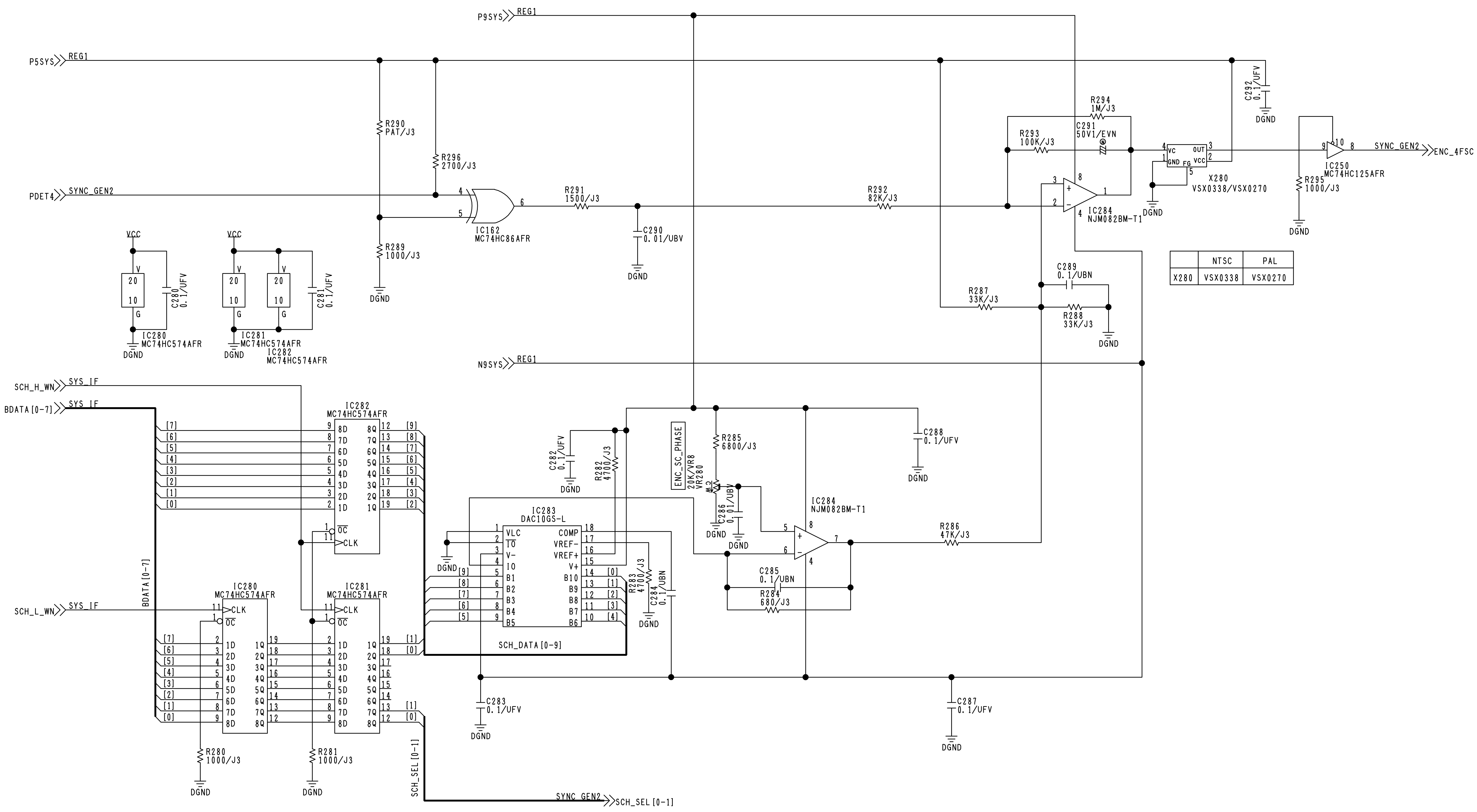


P5SYS
REG1
P9SYS
REG1
WND12
SYNC_GEN2
ER12
SYNC_GEN2
N5SYS
REG1
IC250
MC74HC125AFR
R250
PAT/470/J3
C250
PAT/0.1/UFV
C251
PAT/0.1/UFV
C252
PAT/0.01/UBV
IC251
PAT/NJM082BM-T1
R251
PAT/33K/J3
R252
PAT/10K/J3
R253
PAT/10K/J3
C253
PAT/0.01/UBV
IC251
PAT/NJM082BM-T1
R254
PAT/3300/J3
C254
PAT/50V1/EVN
R255
PAT/1M/J3
R256
PAT/1000/J3
C255
PAT/1000P/UV
D250
PAT/M1MA152KT1
C256
PAT/0.1/UFV
C257
0.1/UFV
X250
VDD OUT
VC GND
PAT/VSX0567A
V
14
7
G
IC250
MC74HC125AFR
R257
1000/J3
R258
1000/PAT/J3
IC250
MC74HC125AFR
SYNC_GEN2
CK12
DGND

COMPONENT NAME	V OUT (H LOCK PLL 2)	09/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM041	

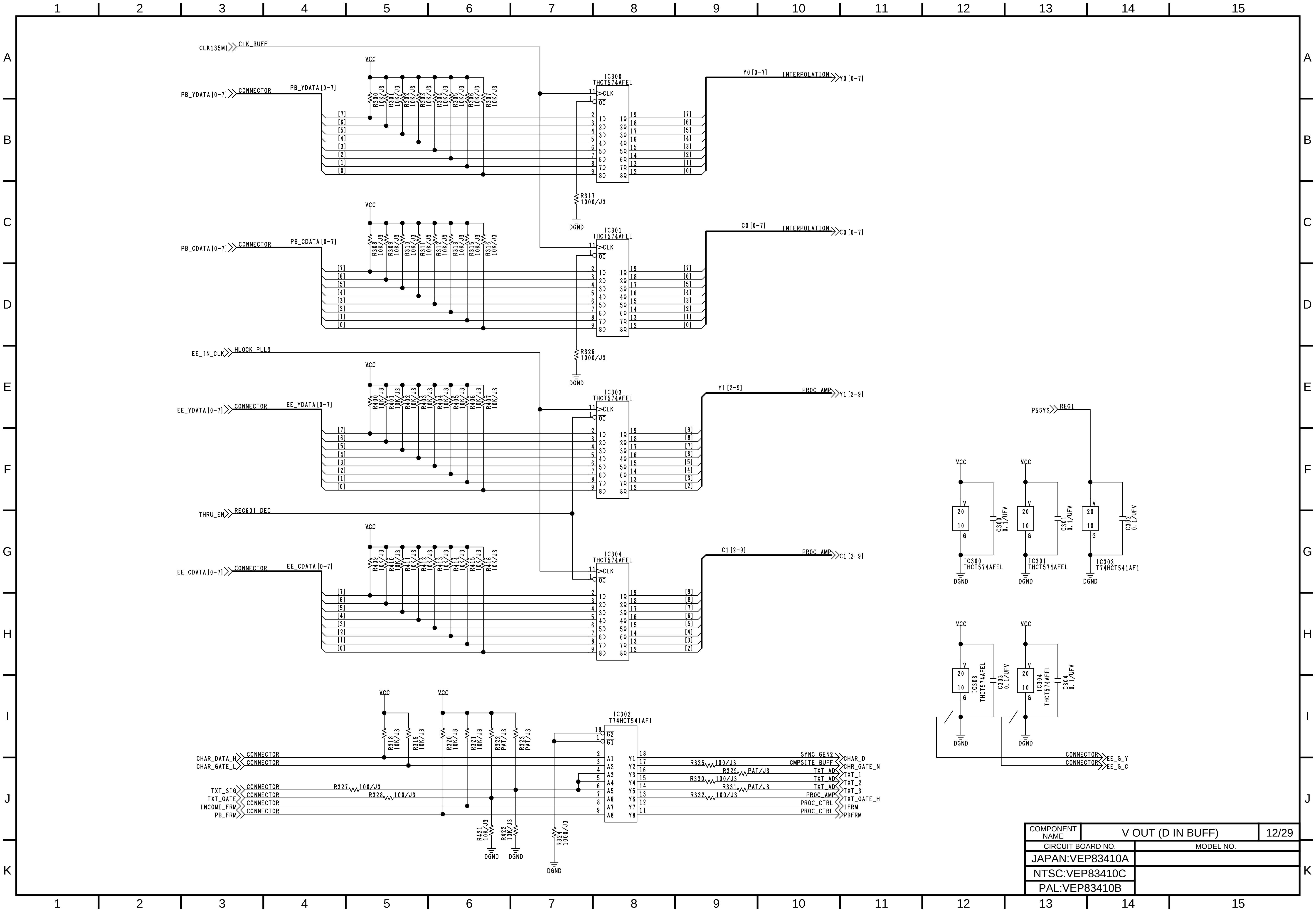

VIDEO_PHASE
P5SYS REG2
P9SYS REG2
WND22 SYNC_GEN2
ER22 SYNC_GEN2
N5SYS REG1
IC250
MC74HC125AFR
R260 470/J3
C266 0.01/UBV
C264 0.1/UFV
C265 0.1/UFV
IC260
NJM082BM-T1
R261 33K/J3
VR260 5K/VR8
R263 10K/4700/J3
R262 10K/J3
C267 0.01/UBV
IC260
NJM082BM-T1
R264 10K/J3
C268 50V1/EVN
R265 1M/J3
R266 1000/J3
C269 1000P/UV
D260 M1MA152KT1
X260
VSX0788
VC VCC GND GND OUT
C270 0.1/UFV
DGND
IC264
SN74AS244ANL
1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4
1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4
1G 2G
R270 1000/J3
D_OUT_BUFF CLK27M
CLK_BUFF CLK27M_A
IC265
SN74AS244ANL
R271 100/J3
CLK_BUFF CLK135M_A
SYNC_GEN2 CK22
VCC
IC262
SN74AS74ANSL
D S Q C1 R Q
R267 100/J3
IC263
74F574SJ-R1
CLK OC
1D 2D 3D 4D 5D 6D 7D 8D
1Q 2Q 3Q 4Q 5Q 6Q 7Q 8Q
R269 100/J3
D_OUT_BUFF CLK135M
PROC_AMP PROC_135
D_OUT_BUFF EE_135M
PROC_AMP PROC_675
D_IN_BUFF EE_IN_CLK
HST_N PROC_CTRL
IC261
74F08SJ-R1
IC262
SN74AS74ANSL
R268 100/J3
TG003
VJR0646
C260 0.1/UFV
IC261 74F08SJ-R1
IC262 SN74AS74ANSL
C261 0.1/UFV
C262 0.1/UFV
C263 0.1/UFV
IC263 74F574SJ-R1
IC264 SN74AS244ANL
IC265 SN74AS244ANL
IC261 74F08SJ-R1
IC261 74F08SJ-R1
IC261 74F08SJ-R1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	V OUT (H LOCK PLL 3)	10/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM042	

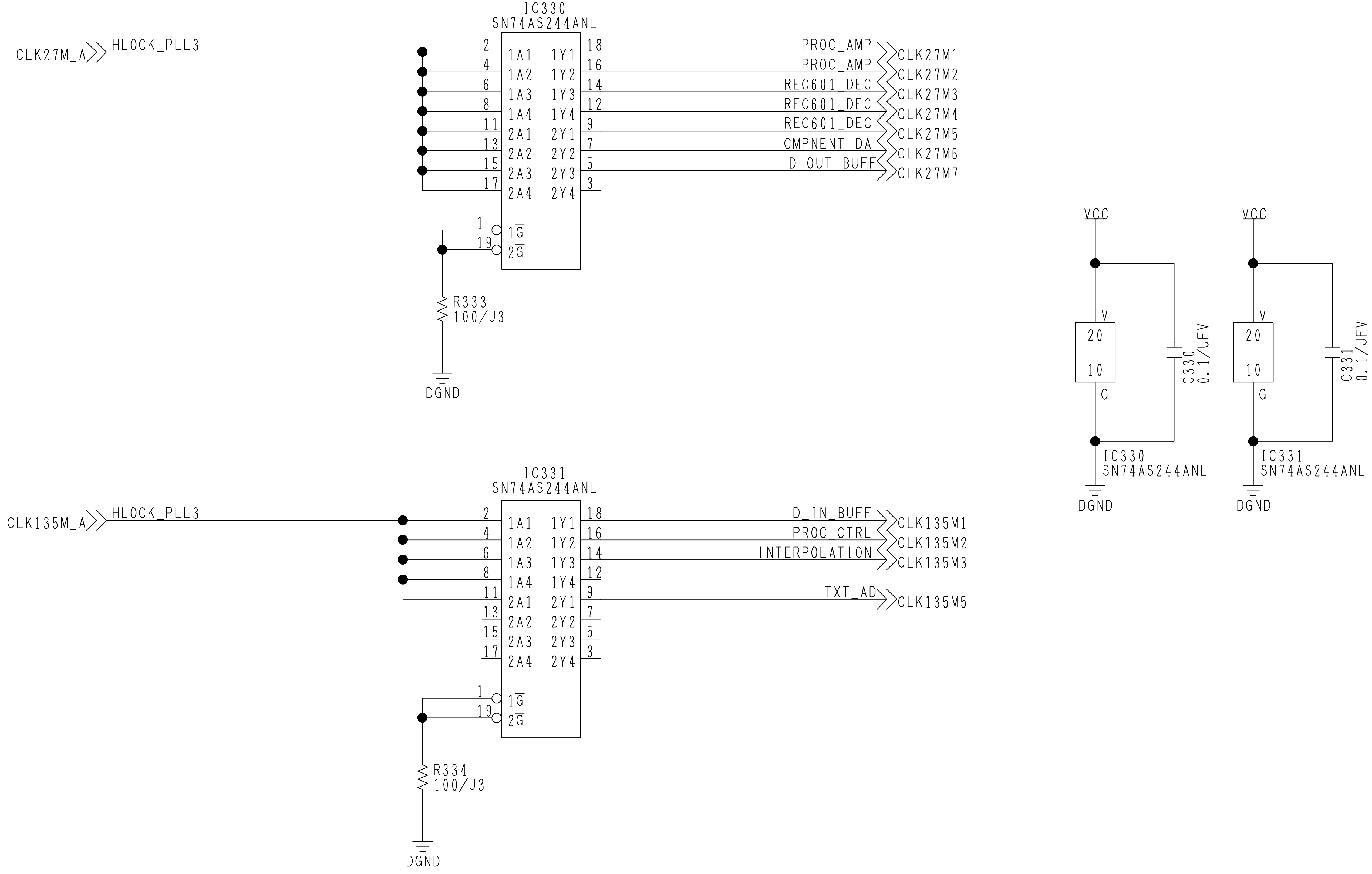

P9SYS
REG1
P5SYS
REG1
R290
PAT/J3
R296
2700/J3
PDET4
SYNC_GEN2
4
5
6
IC162
MC74HC86AFR
R291
1500/J3
C290
0.01/UBV
DGND
R289
1000/J3
DGND
R292
82K/J3
R294
1M/J3
R293
100K/J3
C291
50V1/EVN
3
2
8
1
4
IC284
NJM082BM-T1
C292
0.1/UFV
DGND
VC
OUT
GND
FG
VCC
4
3
1
2
5
X280
VSX0338/VSX0270
DGND
9
10
8
IC250
MC74HC125AFR
SYNC_GEN2
ENC_4FSC
R295
1000/J3
DGND
VCC
V
20
10
G
C280
0.1/UFV
IC280
MC74HC574AFR
DGND
VCC
V
20
10
G
V
20
10
G
C281
0.1/UFV
IC281
MC74HC574AFR
IC282
MC74HC574AFR
DGND
C289
0.1/UBN
R287
33K/J3
R288
33K/J3
DGND
N9SYS
REG1
SCH_H_WN
SYS_IF
BDATA[0-7]
SYS_IF
IC282
MC74HC574AFR
[7] [6] [5] [4] [3] [2] [1] [0]
9 8 7 6 5 4 3 2
8D 7D 6D 5D 4D 3D 2D 1D
8Q 7Q 6Q 5Q 4Q 3Q 2Q 1Q
12 13 14 15 16 17 18 19
[9] [8] [7] [6] [5] [4] [3] [2]
1 OC
11 CLK
BDATA[0-7]
C282
0.1/UFV
DGND
R282
4700/J3
ENC_SC_PHASE
20K/VR8
VR280
R285
6800/J3
C286
0.01/UBV
DGND
DGND
C288
0.1/UFV
DGND
IC284
NJM082BM-T1
5
6
8
7
4
R286
47K/J3
C285
0.1/UBN
R284
680/J3
IC283
DAC10GS-L
1 VLC
2 IO
3 V-
4 IO
5 B1
6 B2
7 B3
8 B4
9 B5
COMP 18
VREF- 17
VREF+ 16
V+ 15
B10 14
B9 13
B8 12
B7 11
B6 10
[9] [8] [7] [6] [5]
[0] [1] [2] [3] [4]
DGND
R283
4700/J3
C284
0.1/UBN
DGND
SCH_DATA[0-9]
SCH_L_WN
SYS_IF
IC280
MC74HC574AFR
11 CLK
1 OC
[7] [6] [5] [4] [3] [2] [1] [0]
2 3 4 5 6 7 8 9
1D 2D 3D 4D 5D 6D 7D 8D
1Q 2Q 3Q 4Q 5Q 6Q 7Q 8Q
19 18 17 16 15 14 13 12
IC281
MC74HC574AFR
11 CLK
1 OC
2 3 4 5 6 7 8 9
1D 2D 3D 4D 5D 6D 7D 8D
1Q 2Q 3Q 4Q 5Q 6Q 7Q 8Q
19 18 17 16 15 14 13 12
[1] [0]
[1] [0]
C283
0.1/UFV
DGND
C287
0.1/UFV
DGND
R280
1000/J3
DGND
R281
1000/J3
DGND
SCH_SEL[0-1]
SYNC_GEN2
SCH_SEL[0-1]

	NTSC	PAL
X280	VSX0338	VSX0270

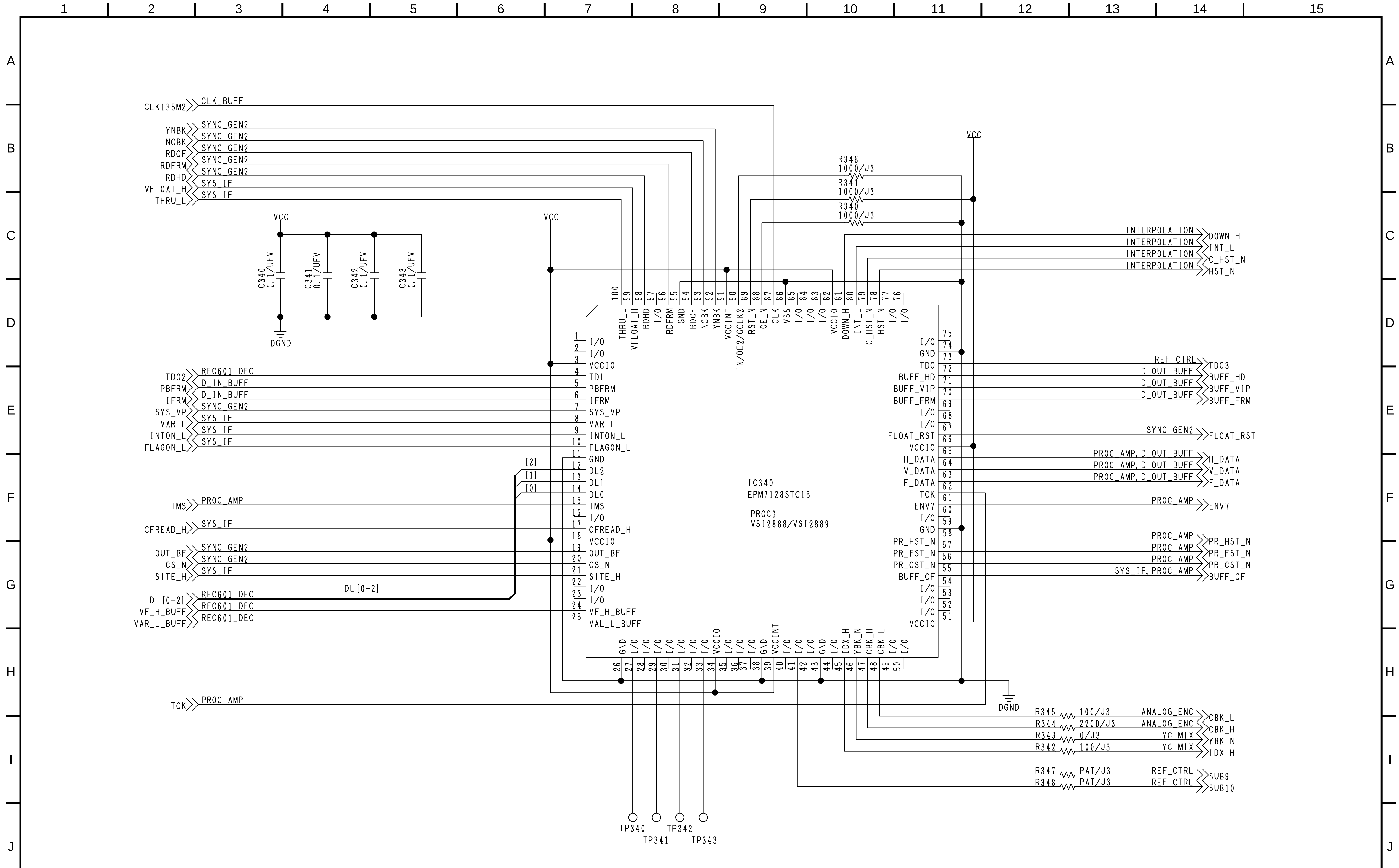
COMPONENT NAME	V OUT (ENC SC PLL)	11/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM043	
]


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
CLK135M1
CLK_BUFF
PB_YDATA[0-7]
CONNECTOR
PB_YDATA[0-7]
VCC
R300 10K/J3
R301 10K/J3
R302 10K/J3
R303 10K/J3
R304 10K/J3
R305 10K/J3
R306 10K/J3
R307 10K/J3
IC300
THCT574AFEL
11 CLK
1 OC
2 1D 1Q 19
3 2D 2Q 18
4 3D 3Q 17
5 4D 4Q 16
6 5D 5Q 15
7 6D 6Q 14
8 7D 7Q 13
9 8D 8Q 12
[7]
[6]
[5]
[4]
[3]
[2]
[1]
[0]
R317 1000/J3
DGND
Y0[0-7]
INTERPOLATION
Y0[0-7]
PB_CDATA[0-7]
CONNECTOR
PB_CDATA[0-7]
VCC
R308 10K/J3
R309 10K/J3
R310 10K/J3
R311 10K/J3
R312 10K/J3
R313 10K/J3
R315 10K/J3
R316 10K/J3
IC301
THCT574AFEL
R326 1000/J3
DGND
C0[0-7]
INTERPOLATION
C0[0-7]
EE_IN_CLK
HLOCK_PLL3
EE_YDATA[0-7]
CONNECTOR
EE_YDATA[0-7]
VCC
R400 10K/J3
R401 10K/J3
R402 10K/J3
R403 10K/J3
R404 10K/J3
R405 10K/J3
R406 10K/J3
R407 10K/J3
IC303
THCT574AFEL
[9]
[8]
[7]
[6]
[5]
[4]
[3]
[2]
Y1[2-9]
PROC_AMP
Y1[2-9]
THRU_EN
REC601_DEC
EE_CDATA[0-7]
CONNECTOR
EE_CDATA[0-7]
VCC
R409 10K/J3
R410 10K/J3
R411 10K/J3
R412 10K/J3
R413 10K/J3
R414 10K/J3
R415 10K/J3
R416 10K/J3
IC304
THCT574AFEL
C1[2-9]
PROC_AMP
C1[2-9]
VCC
VCC
R318 10K/J3
R319 10K/J3
R320 10K/J3
R321 10K/J3
R322 PAT/J3
R323 PAT/J3
IC302
T74HCT541AF1
19 G2
1 G1
2 A1 Y1 18
3 A2 Y2 17
4 A3 Y3 16
5 A4 Y4 15
6 A5 Y5 14
7 A6 Y6 13
8 A7 Y7 12
9 A8 Y8 11
CHAR_DATA_H
CHAR_GATE_L
TXT_SIG
TXT_GATE
INCOME_FRM
PB_FRM
CONNECTOR
CONNECTOR
CONNECTOR
CONNECTOR
CONNECTOR
CONNECTOR
R327 100/J3
R328 100/J3
R421 10K/J3
R422 10K/J3
DGND
DGND
R324 1000/J3
DGND
R325 100/J3
R329 PAT/J3
R330 100/J3
R331 PAT/J3
R332 100/J3
SYNC_GEN2
CMPSITE_BUFF
TXT_AD
TXT_AD
TXT_AD
PROC_AMP
PROC_CTRL
PROC_CTRL
CHAR_D
CHR_GATE_N
TXT_1
TXT_2
TXT_3
TXT_GATE_H
IFRM
PBFRM
P5SYS
REG1
VCC
VCC
V
20
10
G
C300 0.1/UFV
C301 0.1/UFV
C302 0.1/UFV
IC300
THCT574AFEL
IC301
THCT574AFEL
IC302
T74HCT541AF1
DGND
DGND
DGND
VCC
VCC
IC303
THCT574AFEL
C303 0.1/UFV
IC304
THCT574AFEL
C304 0.1/UFV
DGND
DGND
CONNECTOR
CONNECTOR
EE_G_Y
EE_G_C

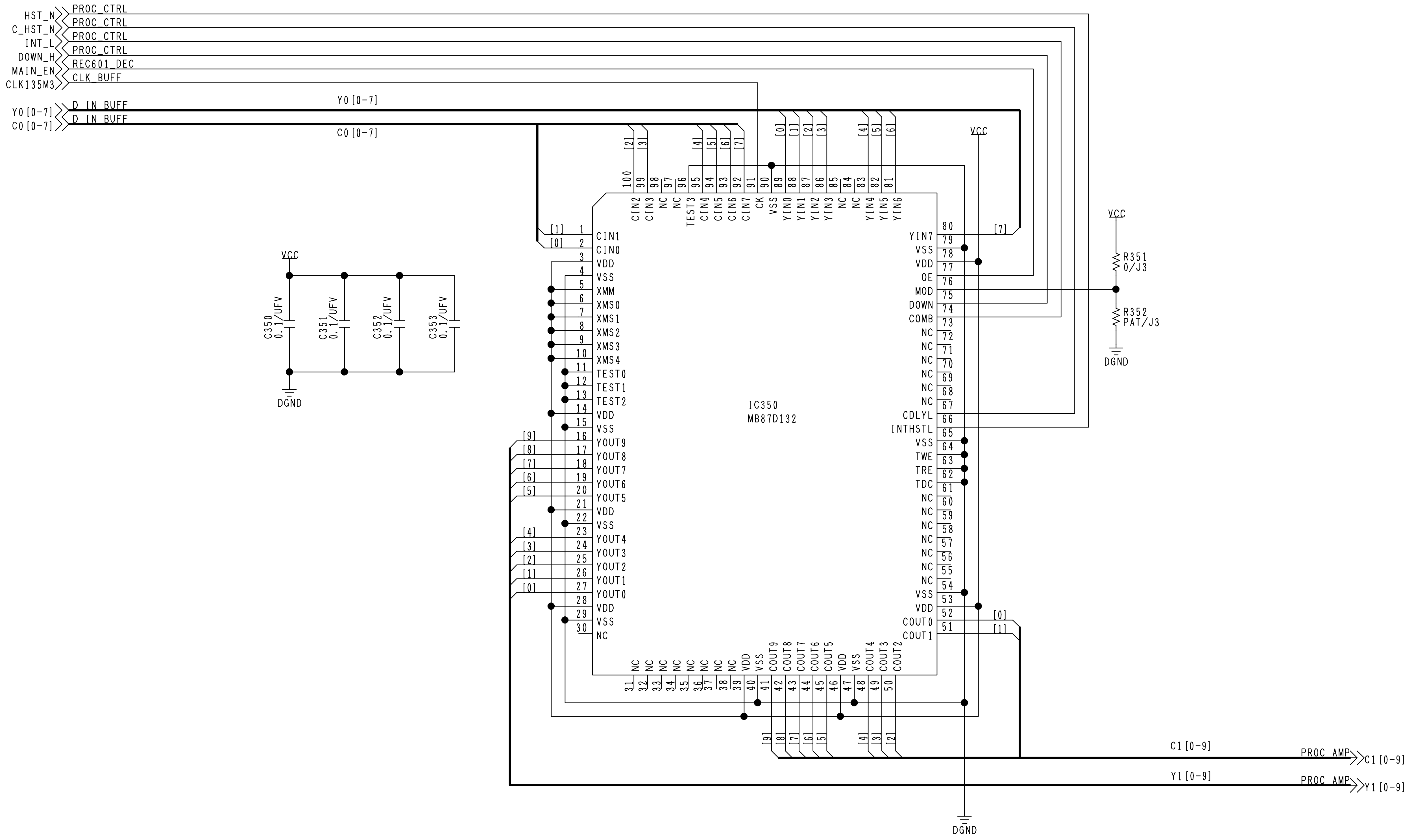
COMPONENT NAME	V OUT (D IN BUFF)	12/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B		


IC330
SN74AS244ANL
CLK27M_A
HLOCK_PLL3
2 1A1 1Y1 18
4 1A2 1Y2 16
6 1A3 1Y3 14
8 1A4 1Y4 12
11 2A1 2Y1 9
13 2A2 2Y2 7
15 2A3 2Y3 5
17 2A4 2Y4 3
1 1G
19 2G
PROC_AMP
PROC_AMP
REC601_DEC
REC601_DEC
REC601_DEC
CMPNENT_DA
D_OUT_BUFF
CLK27M1
CLK27M2
CLK27M3
CLK27M4
CLK27M5
CLK27M6
CLK27M7
R333
100/J3
DGND
VCC
V
20
10
G
C330
0.1/UFV
IC330
SN74AS244ANL
DGND
VCC
V
20
10
G
C331
0.1/UFV
IC331
SN74AS244ANL
DGND
IC331
SN74AS244ANL
CLK135M_A
HLOCK_PLL3
2 1A1 1Y1 18
4 1A2 1Y2 16
6 1A3 1Y3 14
8 1A4 1Y4 12
11 2A1 2Y1 9
13 2A2 2Y2 7
15 2A3 2Y3 5
17 2A4 2Y4 3
1 1G
19 2G
D_IN_BUFF
PROC_CTRL
INTERPOLATION
TXT_AD
CLK135M1
CLK135M2
CLK135M3
CLK135M5
R334
100/J3
DGND

COMPONENT NAME	V OUT (CLK BUFF)	13/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM045	


CLK135M2 CLK_BUFF
YNBK SYNC_GEN2
NCBK SYNC_GEN2
RDCF SYNC_GEN2
RDFRM SYNC_GEN2
RDHD SYNC_GEN2
VFLOAT_H SYS_IF
THRU_L SYS_IF
VCC
C340 0.1/UFV
C341 0.1/UFV
C342 0.1/UFV
C343 0.1/UFV
DGND
TD02 REC601_DEC
PBFRM D_IN_BUFF
IFRM D_IN_BUFF
SYS_VP SYNC_GEN2
VAR_L SYS_IF
INTON_L SYS_IF
FLAGON_L SYS_IF
TMS PROC_AMP
CFREAD_H SYS_IF
OUT_BF SYNC_GEN2
CS_N SYNC_GEN2
SITE_H SYS_IF
DL[0-2] REC601_DEC
VF_H_BUFF REC601_DEC
VAR_L_BUFF REC601_DEC
DL[0-2]
[2] [1] [0]
TCK PROC_AMP
IC340
EPM7128STC15
PROC3
VSI2888/VSI2889
1 I/O
2 I/O
3 VCCIO
4 TDI
5 PBFRM
6 IFRM
7 SYS_VP
8 VAR_L
9 INTON_L
10 FLAGON_L
11 GND
12 DL2
13 DL1
14 DL0
15 TMS
16 I/O
17 CFREAD_H
18 VCCIO
19 OUT_BF
20 CS_N
21 SITE_H
22 I/O
23 I/O
24 VF_H_BUFF
25 VAL_L_BUFF
26 GND
27 I/O
28 I/O
29 I/O
30 I/O
31 I/O
32 I/O
33 I/O
34 VCCIO
35 I/O
36 I/O
37 I/O
38 GND
39 VCCINT
40 I/O
41 I/O
42 I/O
43 GND
44 I/O
45 IDX_H
46 YBK_N
47 CBK_H
48 CBK_L
49 I/O
50 I/O
51 VCCIO
52 I/O
53 I/O
54 BUFF_CF
55 PR_CST_N
56 PR_FST_N
57 PR_HST_N
58 GND
59 I/O
60 ENV7
61 TCK
62 F_DATA
63 V_DATA
64 H_DATA
65 VCCIO
66 FLOAT_RST
67 I/O
68 I/O
69 BUFF_FRM
70 BUFF_VIP
71 BUFF_HD
72 TDO
73 GND
74 I/O
75
76 I/O
77 I/O
78 HST_N
79 C_HST_N
80 INT_L
81 DOWN_H
82 VCCIO
83 I/O
84 I/O
85 VSS
86 CLK
87 OE_N
88 RST_N
89 IN/OE2/GCLK2
90 VCCINT
91 YNBK
92 NCBK
93 RDCF
94 GND
95 RDFRM
96 I/O
97 RDHD
98 VFLOAT_H
99 THRU_L
100
R346 1000/J3
R341 1000/J3
R340 1000/J3
INTERPOLATION DOWN_H
INTERPOLATION INT_L
INTERPOLATION C_HST_N
INTERPOLATION HST_N
REF_CTRL TDO3
D_OUT_BUFF BUFF_HD
D_OUT_BUFF BUFF_VIP
D_OUT_BUFF BUFF_FRM
SYNC_GEN2 FLOAT_RST
PROC_AMP, D_OUT_BUFF H_DATA
PROC_AMP, D_OUT_BUFF V_DATA
PROC_AMP, D_OUT_BUFF F_DATA
PROC_AMP ENV7
PROC_AMP PR_HST_N
PROC_AMP PR_FST_N
PROC_AMP PR_CST_N
SYS_IF, PROC_AMP BUFF_CF
R345 100/J3 ANALOG_ENC CBK_L
R344 2200/J3 ANALOG_ENC CBK_H
R343 0/J3 YC_MIX YBK_N
R342 100/J3 YC_MIX IDX_H
R347 PAT/J3 REF_CTRL SUB9
R348 PAT/J3 REF_CTRL SUB10
TP340 TP341 TP342 TP343
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

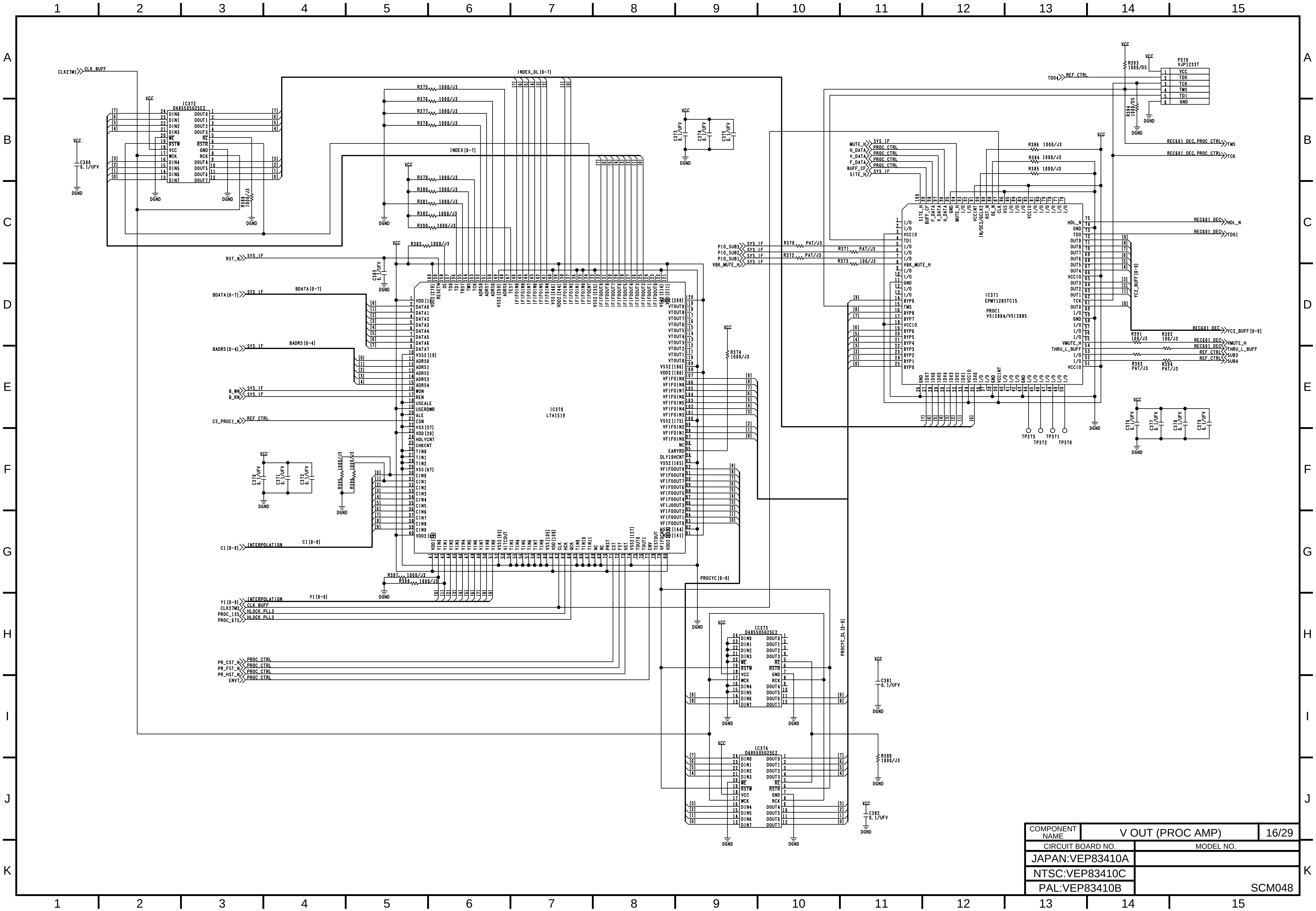
COMPONENT NAME	V OUT (PROC CTRL)	14/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM046	


HST_N
C_HST_N
INT_L
DOWN_H
MAIN_EN
CLK135M3
PROC_CTRL
PROC_CTRL
PROC_CTRL
PROC_CTRL
REC601_DEC
CLK_BUFF
Y0[0-7]
C0[0-7]
D_IN_BUFF
D_IN_BUFF
Y0[0-7]
C0[0-7]
VCC
C350 0.1/UFV
C351 0.1/UFV
C352 0.1/UFV
C353 0.1/UFV
DGND
IC350
MB87D132
CIN1
CIN0
VDD
VSS
XMM
XMS0
XMS1
XMS2
XMS3
XMS4
TEST0
TEST1
TEST2
VDD
VSS
YOUT9
YOUT8
YOUT7
YOUT6
YOUT5
VDD
VSS
YOUT4
YOUT3
YOUT2
YOUT1
YOUT0
VDD
VSS
NC
CIN2
CIN3
NC
NC
TEST3
CIN4
CIN5
CIN6
CIN7
CK
VSS
YIN0
YIN1
YIN2
YIN3
NC
NC
YIN4
YIN5
YIN6
YIN7
VSS
VDD
OE
MOD
DOWN
COMB
NC
CDLYL
INTHSTL
VSS
TWE
TRE
TDC
VSS
VDD
COUT0
COUT1
VDD
VSS
COUT9
COUT8
COUT7
COUT6
COUT5
VDD
VSS
COUT4
COUT3
COUT2
VCC
R351 0/J3
R352 PAT/J3
DGND
DGND
C1[0-9]
Y1[0-9]
PROC_AMP
PROC_AMP
C1[0-9]
Y1[0-9]

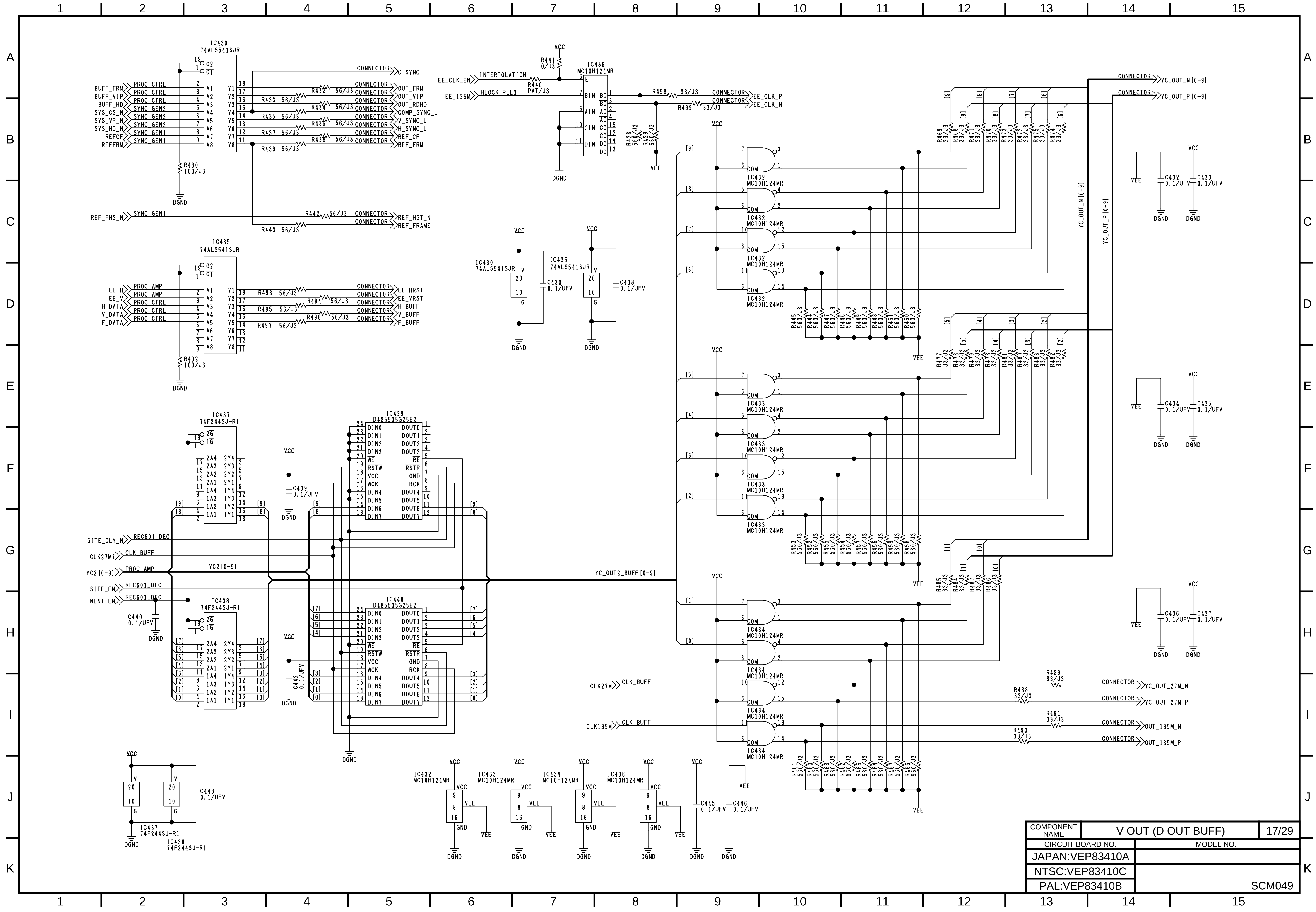
COMPONENT NAME
V OUT (INTER PORATION)
15/29

CIRCUIT BOARD NO.
MODEL NO.
JAPAN:VEP83410A
NTSC:VEP83410C
PAL:VEP83410B

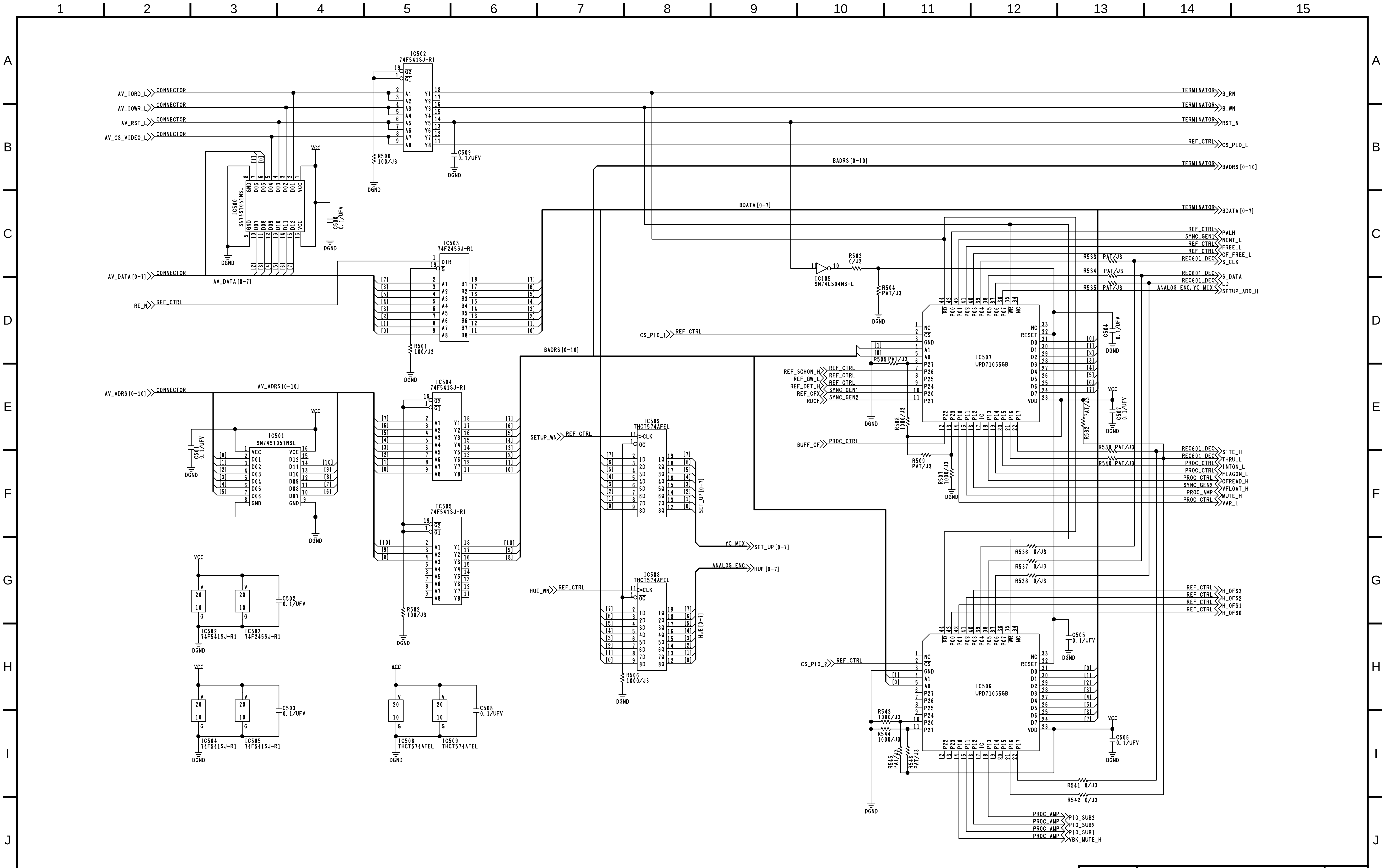
SCM047


IC372
D485505G25E2
IC370
LTA1519
IC371
EPM7128STC15
PROC1
VS12884/VS12885
IC373
D485505G25E2
IC374
D485505G25E2
P370
VJP1233T
CLK27M1
CLK_BUFF
INDEX_DL[0-7]
INDEX[0-7]
RST_N
SYS_IF
BDATA[0-7]
BADRS[0-4]
B_WN
B_RN
CS_PROC1_N
REF_CTRL
C1[0-9]
INTERPOLATION
Y1[0-9]
CLK27M2
HLOCK_PLL3
PROC_135
PROC_675
PR_CST_N
PR_FST_N
PR_HST_N
ENV1
PROC_CTRL
PROCYC[0-9]
PROCYC_DL[0-9]
P10_SUB3
P10_SUB2
P10_SUB1
VBK_MUTE_H
PAT/J3
MUTE_H
H_DATA
V_DATA
F_DATA
BUFF_CF
SITE_H
TDO4
TMS
TCK
REC601_DEC,PROC_CTRL
REC601_DEC
HDL_N
TDO1
YC2_BUFF[0-9]
VMUTE_H
THRU_L_BUFF
SUB3
SUB4
TP370
TP371
TP372
TP373
VCC
DGND

COMPONENT NAME	V OUT (PROC AMP)	16/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM048	

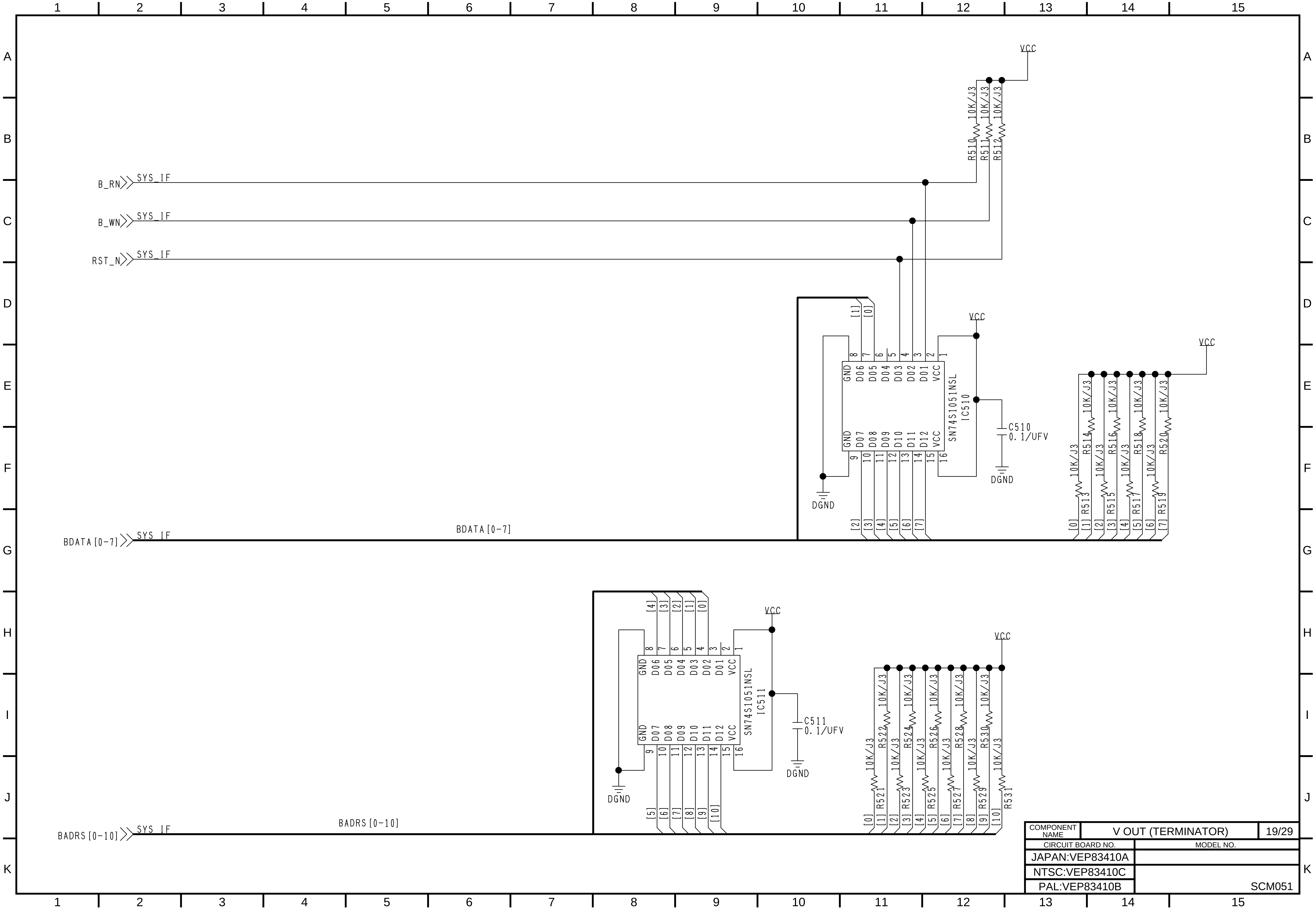

IC430
74ALS541SJR
BUFF_FRM
BUFF_VIP
BUFF_HD
SYS_CS_N
SYS_VP_N
SYS_HD_N
REFCF
REFFRM
PROC_CTRL
SYNC_GEN2
SYNC_GEN1
R430
100/J3
DGND
CONNECTOR
C_SYNC
OUT_FRM
OUT_VIP
OUT_RDHD
COMP_SYNC_L
V_SYNC_L
H_SYNC_L
REF_CF
REF_FRM
R432 56/J3
R433 56/J3
R434 56/J3
R435 56/J3
R436 56/J3
R437 56/J3
R438 56/J3
R439 56/J3
REF_FHS_N
R442 56/J3
R443 56/J3
REF_HST_N
REF_FRAME
IC435
74ALS541SJR
EE_H
EE_V
H_DATA
V_DATA
F_DATA
PROC_AMP
R492
100/J3
R493 56/J3
R494 56/J3
R495 56/J3
R496 56/J3
R497 56/J3
EE_HRST
EE_VRST
H_BUFF
V_BUFF
F_BUFF
VCC
R441
0/J3
IC436
MC10H124MR
EE_CLK_EN
INTERPOLATION
R440
PAT/J3
EE_135M
HLOCK_PLL3
R498 33/J3
R499 33/J3
EE_CLK_P
EE_CLK_N
R428 560/J3
R429 560/J3
VEE
C430
0.1/UFV
C438
0.1/UFV
IC437
74F244SJ-R1
IC438
74F244SJ-R1
IC439
D485505G25E2
IC440
D485505G25E2
SITE_DLY_N
REC601_DEC
CLK27M
CLK_BUFF
YC2[0-9]
PROC_AMP
SITE_EN
NENT_EN
C440
0.1/UFV
C439
0.1/UFV
C442
0.1/UFV
YC2[0-9]
YC_OUT2_BUFF[0-9]
IC432
MC10H124MR
IC433
MC10H124MR
IC434
MC10H124MR
YC_OUT_N[0-9]
YC_OUT_P[0-9]
C432
0.1/UFV
C433
0.1/UFV
C434
0.1/UFV
C435
0.1/UFV
C436
0.1/UFV
C437
0.1/UFV
R489 33/J3
R488 33/J3
R491 33/J3
R490 33/J3
CLK27M
CLK135M
YC_OUT_27M_N
YC_OUT_27M_P
OUT_135M_N
OUT_135M_P
C443
0.1/UFV
C445
0.1/UFV
C446
0.1/UFV
DGND

COMPONENT NAME	V OUT (D OUT BUFF)	17/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM049	



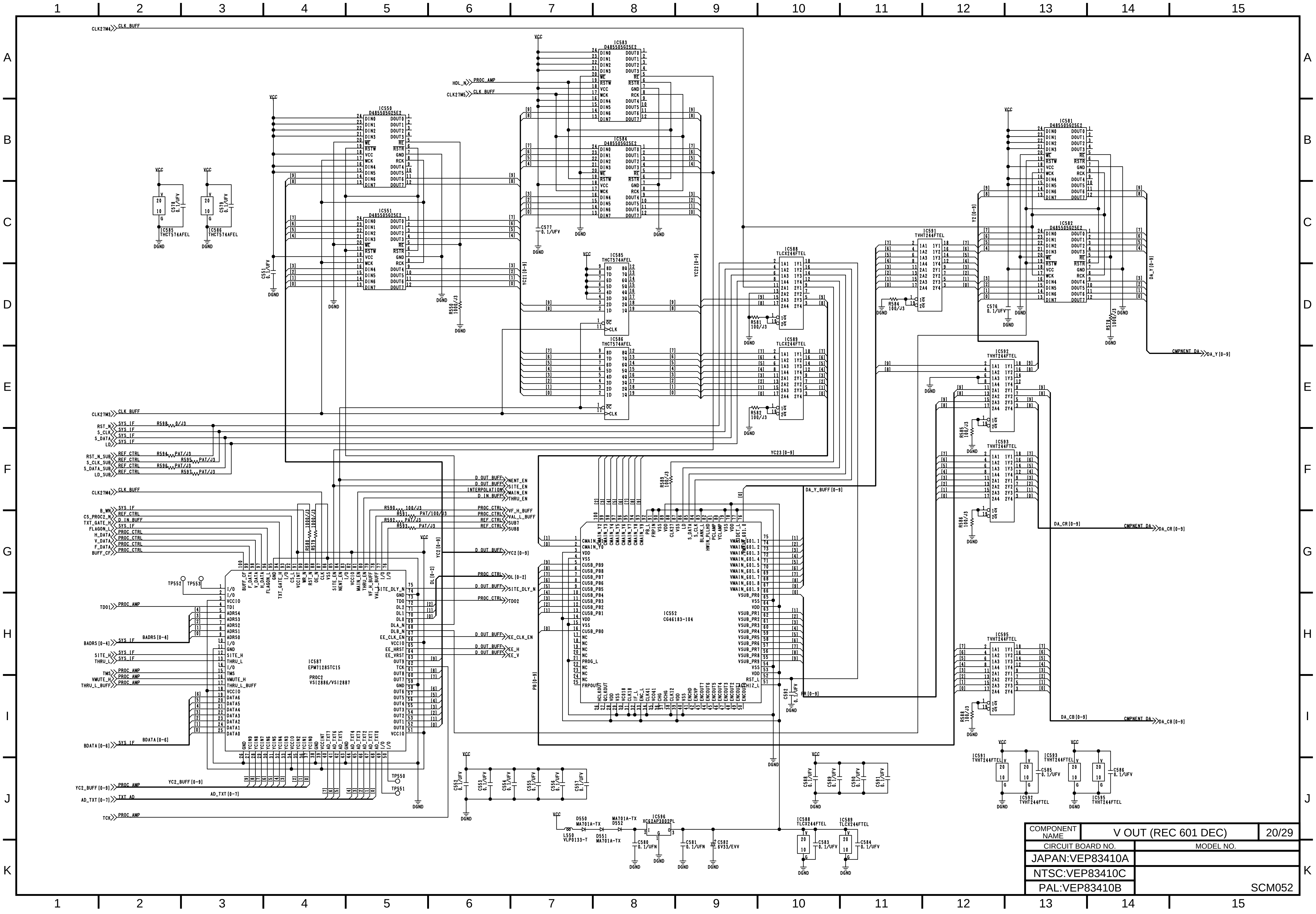
IC502
74F541SJ-R1
IC503
74F245SJ-R1
IC504
74F541SJ-R1
IC505
74F541SJ-R1
IC500
SN74S1051NSL
IC501
SN74S1051NSL
IC509
THCT574AFEL
IC508
THCT574AFEL
IC507
UPD71055GB
IC506
UPD71055GB
IC105
SN74LS04NS-L
AV_IORD_L
AV_IOWR_L
AV_RST_L
AV_CS_VIDEO_L
AV_DATA[0-7]
RE_N
AV_ADRS[0-10]
CONNECTOR
TERMINATOR
B_RN
B_WN
RST_N
CS_PLD_L
BADRS[0-10]
BDATA[0-7]
REF_CTRL
PALH
SYNC_GEN1
NENT_L
FREE_L
CF_FREE_L
REC601_DEC
S_CLK
S_DATA
LD
ANALOG_ENC,YC_MIX
SETUP_ADD_H
CS_PIO_1
REF_SCHON_H
REF_BW_L
REF_DET_H
REF_CFX
RDCF
SYNC_GEN2
BUFF_CF
PROC_CTRL
SITE_H
THRU_L
INTON_L
FLAGON_L
CFREAD_H
VFLOAT_H
PROC_AMP
MUTE_H
VAR_L
SETUP_WN
YC_MIX
SET_UP[0-7]
ANALOG_ENC
HUE[0-7]
HUE_WN
H_OFS3
H_OFS2
H_OFS1
H_OFS0
CS_PIO_2
PIO_SUB3
PIO_SUB2
PIO_SUB1
VBK_MUTE_H
VCC
DGND
R500 100/J3
R501 100/J3
R502 100/J3
R503 0/J3
R504 PAT/J3
R505 PAT/J3
R506 1000/J3
R507 1000/J3
R508 1000/J3
R509 PAT/J3
R532 PAT/J3
R533 PAT/J3
R534 PAT/J3
R535 PAT/J3
R536 0/J3
R537 0/J3
R538 0/J3
R539 PAT/J3
R540 PAT/J3
R541 0/J3
R542 0/J3
R543 1000/J3
R544 1000/J3
R545 PAT/J3
R546 PAT/J3
C500 0.1/UFV
C501 0.1/UFV
C502 0.1/UFV
C503 0.1/UFV
C504 0.1/UFV
C505 0.1/UFV
C506 0.1/UFV
C507 0.1/UFV
C508 0.1/UFV
C509 0.1/UFV
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	V OUT (SYS IF)	18/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM050	

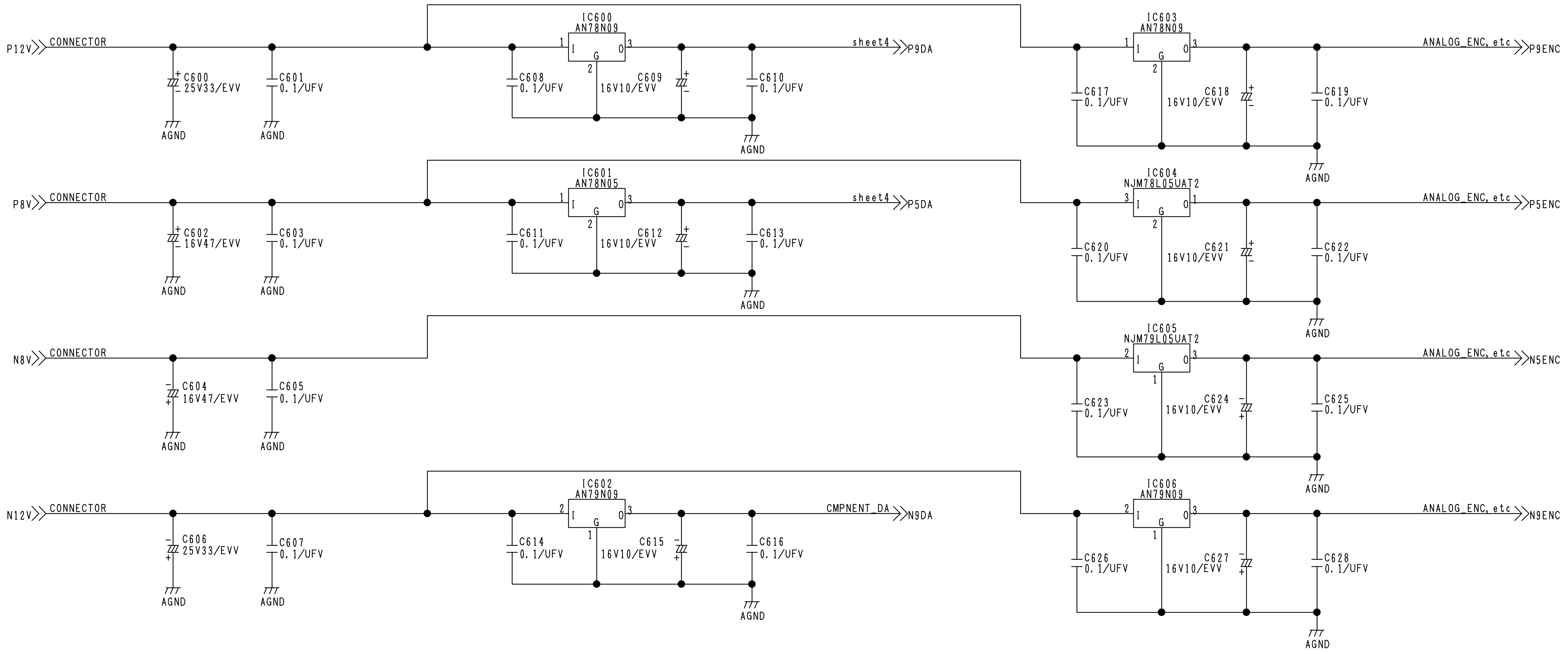


B_RN
B_WN
RST_N
SYS_IF
BDATA[0-7]
BADRS[0-10]
VCC
DGND
R510
R511
R512
10K/J3
SN74S1051NSL
IC510
IC511
GND
D01
D02
D03
D04
D05
D06
D07
D08
D09
D10
D11
D12
C510
C511
0.1/UFV
R513
R514
R515
R516
R517
R518
R519
R520
R521
R522
R523
R524
R525
R526
R527
R528
R529
R530
R531

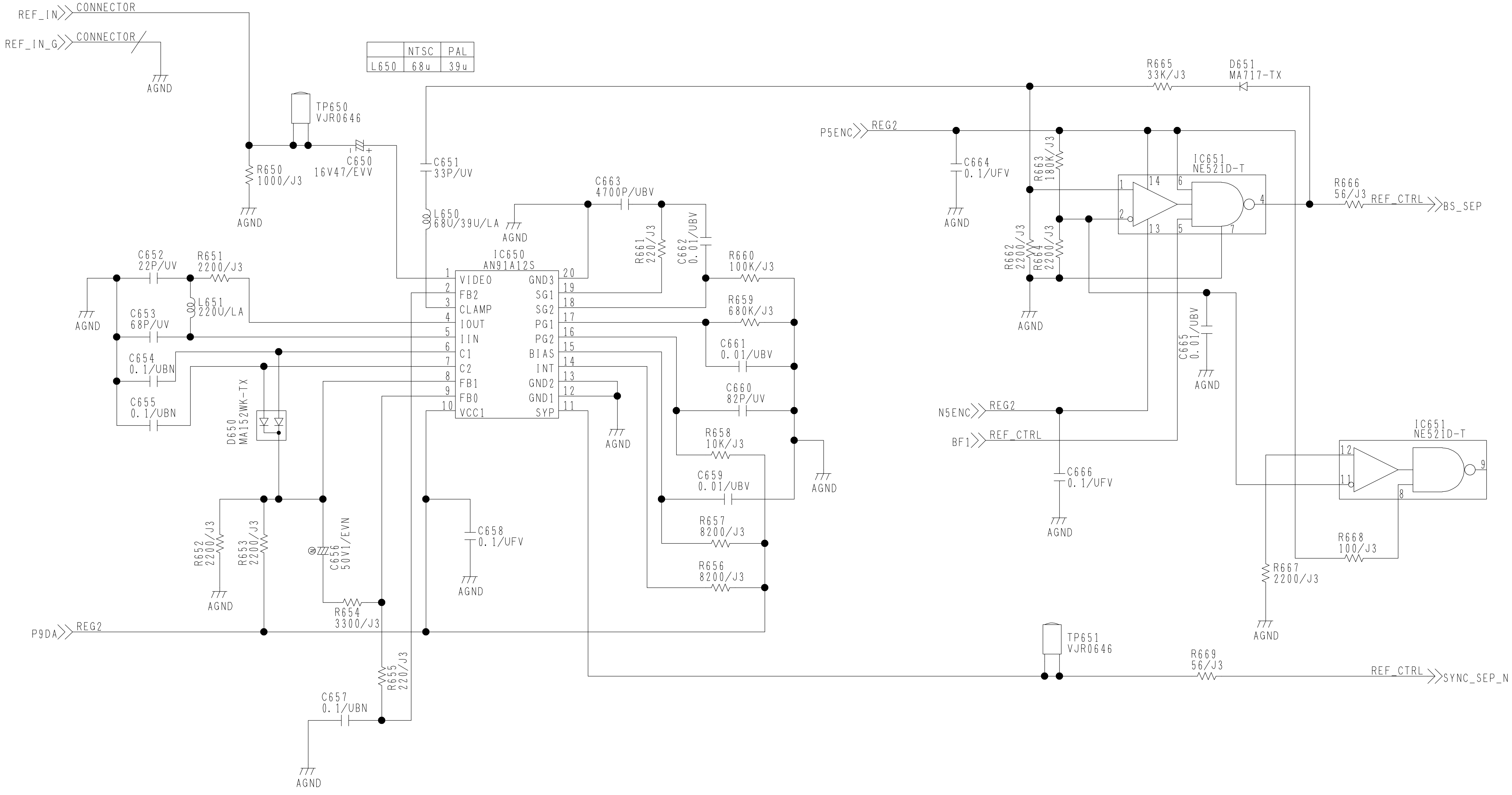
COMPONENT NAME	V OUT (TERMINATOR)	19/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM051	


IC583 D485505G25E2
IC584 D485505G25E2
IC550 D485505G25E2
IC551 D485505G25E2
IC581 D485505G25E2
IC582 D485505G25E2
IC585 THCT574AFEL
IC586 THCT574AFEL
IC588 TLCX244FTEL
IC589 TLCX244FTEL
IC591 TVHT244FTEL
IC592 TVHT244FTEL
IC593 TVHT244FTEL
IC595 TVHT244FTEL
IC587 EPM7128STC15 PROC2 VSI2886/VSI2887
IC552 CG46183-104
IC596 XC62AP3002PL
CLK27M4
CLK_BUFF
CLK27M5
HDL_N
PROC_AMP
VCC
DGND
YC21[0-9]
YC22[0-9]
YC23[0-9]
Y2[0-9]
DA_Y[0-9]
DA_CR[0-9]
DA_CB[0-9]
CMPNENT DA
DA_Y_BUFF[0-9]
PB[0-9]
PR[0-9]
DL[0-2]
YC2[0-9]
SITE_DLY_N
TDO2
EE_CLK_EN
EE_H
EE_V
NENT_EN
SITE_EN
MAIN_EN
THRU_EN
VF_H_BUFF
VAL_L_BUFF
SUB7
SUB8
RST_N
S_CLK
S_DATA
LD
RST_N_SUB
S_CLK_SUB
S_DATA_SUB
LD_SUB
B_WN
CS_PROC2_N
TXT_GATE_H
FLAGON_L
H_DATA
V_DATA
F_DATA
BUFF_CF
TDO1
BADRS[0-4]
SITE_H
THRU_L
TMS
VMUTE_H
THRU_L_BUFF
BDATA[0-6]
YC2_BUFF[0-9]
AD_TXT[0-7]
TCK
TP550
TP551
TP552
TP553
L550 VLP0133-T
D550 MA701A-TX
D551 MA701A-TX
D552 MA701A-TX
C582 6V33/EVV

COMPONENT NAME	V OUT (REC 601 DEC)	20/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM052	

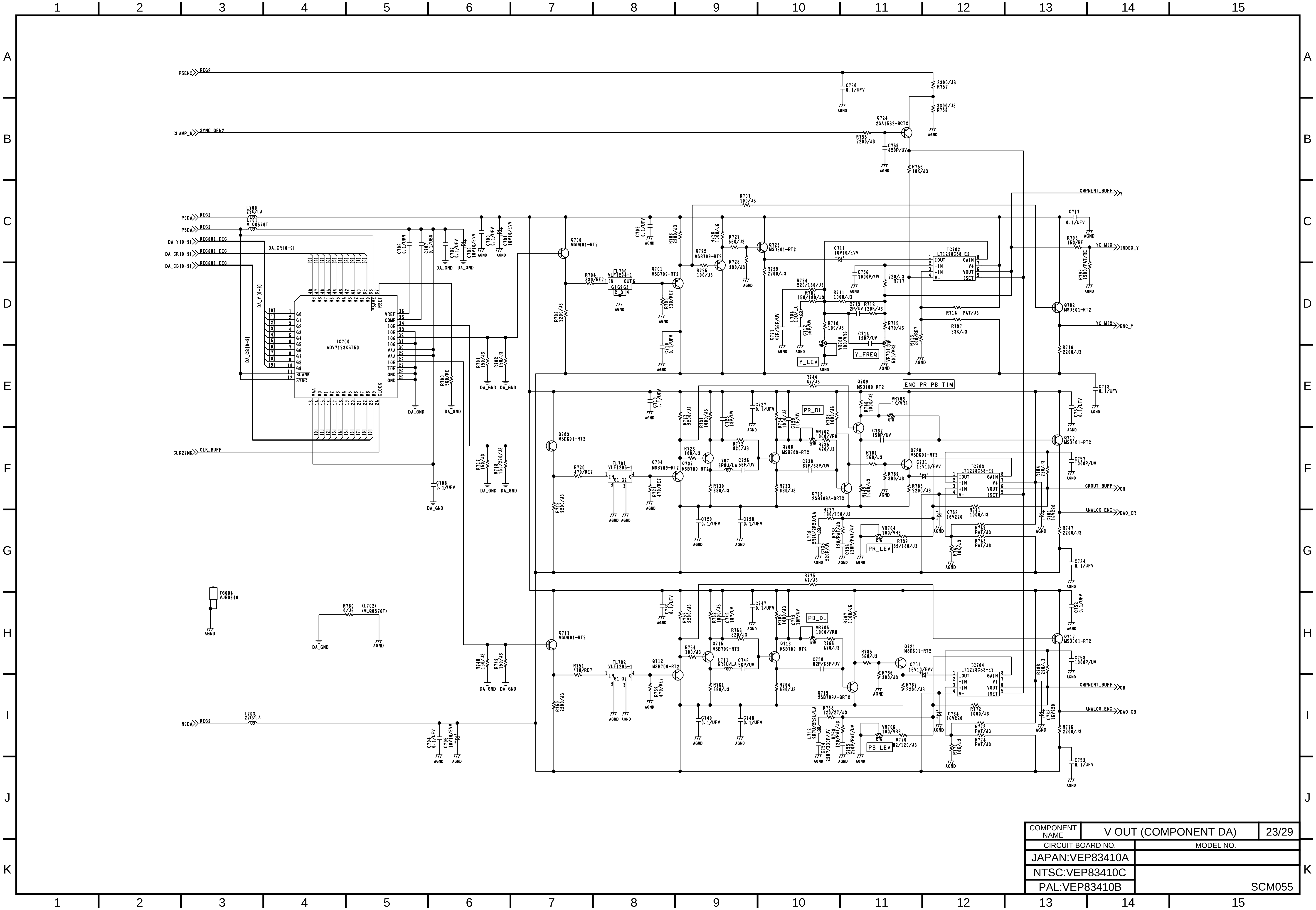

P12V
CONNECTOR
C600
25V33/EVV
C601
0.1/UFV
AGND
IC600
AN78N09
C608
0.1/UFV
C609
16V10/EVV
C610
0.1/UFV
sheet4
P9DA
IC603
AN78N09
C617
0.1/UFV
C618
16V10/EVV
C619
0.1/UFV
ANALOG_ENC, etc
P9ENC
P8V
C602
16V47/EVV
C603
0.1/UFV
IC601
AN78N05
C611
0.1/UFV
C612
16V10/EVV
C613
0.1/UFV
P5DA
IC604
NJM78L05UAT2
C620
0.1/UFV
C621
16V10/EVV
C622
0.1/UFV
P5ENC
N8V
C604
16V47/EVV
C605
0.1/UFV
IC605
NJM79L05UAT2
C623
0.1/UFV
C624
16V10/EVV
C625
0.1/UFV
N5ENC
N12V
C606
25V33/EVV
C607
0.1/UFV
IC602
AN79N09
C614
0.1/UFV
C615
16V10/EVV
C616
0.1/UFV
CMPNENT_DA
N9DA
IC606
AN79N09
C626
0.1/UFV
C627
16V10/EVV
C628
0.1/UFV
N9ENC

COMPONENT NAME	V OUT (REG 2)	21/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM053	

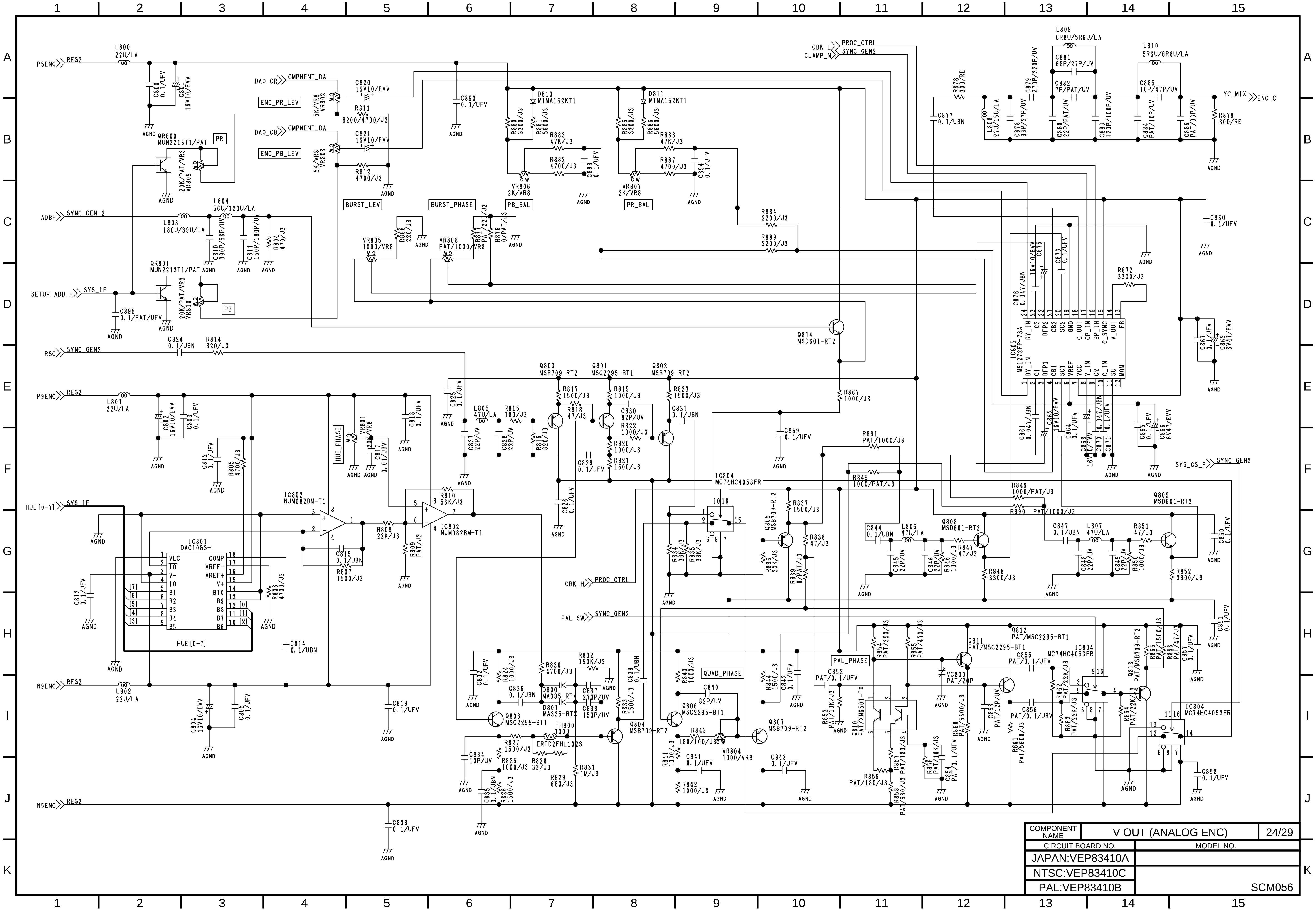

REF_IN
CONNECTOR
REF_IN_G
CONNECTOR
AGND
TP650
VJR0646
R650
1000/J3
C650
16V47/EVV
C651
33P/UV
L650
68U/39U/LA
C663
4700P/UBV
AGND
IC650
AN91A12S
1 VIDEO
2 FB2
3 CLAMP
4 IOUT
5 IIN
6 C1
7 C2
8 FB1
9 FB0
10 VCC1
20 GND3
19 SG1
18 SG2
17 PG1
16 PG2
15 BIAS
14 INT
13 GND2
12 GND1
11 SYP
R661
2200/J3
C662
0.01/UBV
R660
100K/J3
R659
680K/J3
C661
0.01/UBV
C660
82P/UV
R658
10K/J3
C659
0.01/UBV
R657
8200/J3
R656
8200/J3
C652
22P/UV
R651
2200/J3
L651
220U/LA
C653
68P/UV
C654
0.1/UBN
C655
0.1/UBN
D650
MA152WK-TX
R652
2200/J3
R653
2200/J3
C656
50V1/EVN
R654
3300/J3
R655
220/J3
C657
0.1/UBN
C658
0.1/UFV
P9DA
REG2
R665
33K/J3
D651
MA717-TX
P5ENC
REG2
C664
0.1/UFV
R663
180K/J3
IC651
NE521D-T
R666
56/J3
REF_CTRL
BS_SEP
R662
2200/J3
R664
2200/J3
C665
0.01/UBV
N5ENC
REG2
BF1
REF_CTRL
C666
0.1/UFV
IC651
NE521D-T
R668
100/J3
R667
2200/J3
TP651
VJR0646
R669
56/J3
REF_CTRL
SYNC_SEP_N

	NTSC	PAL
L650	68u	39u

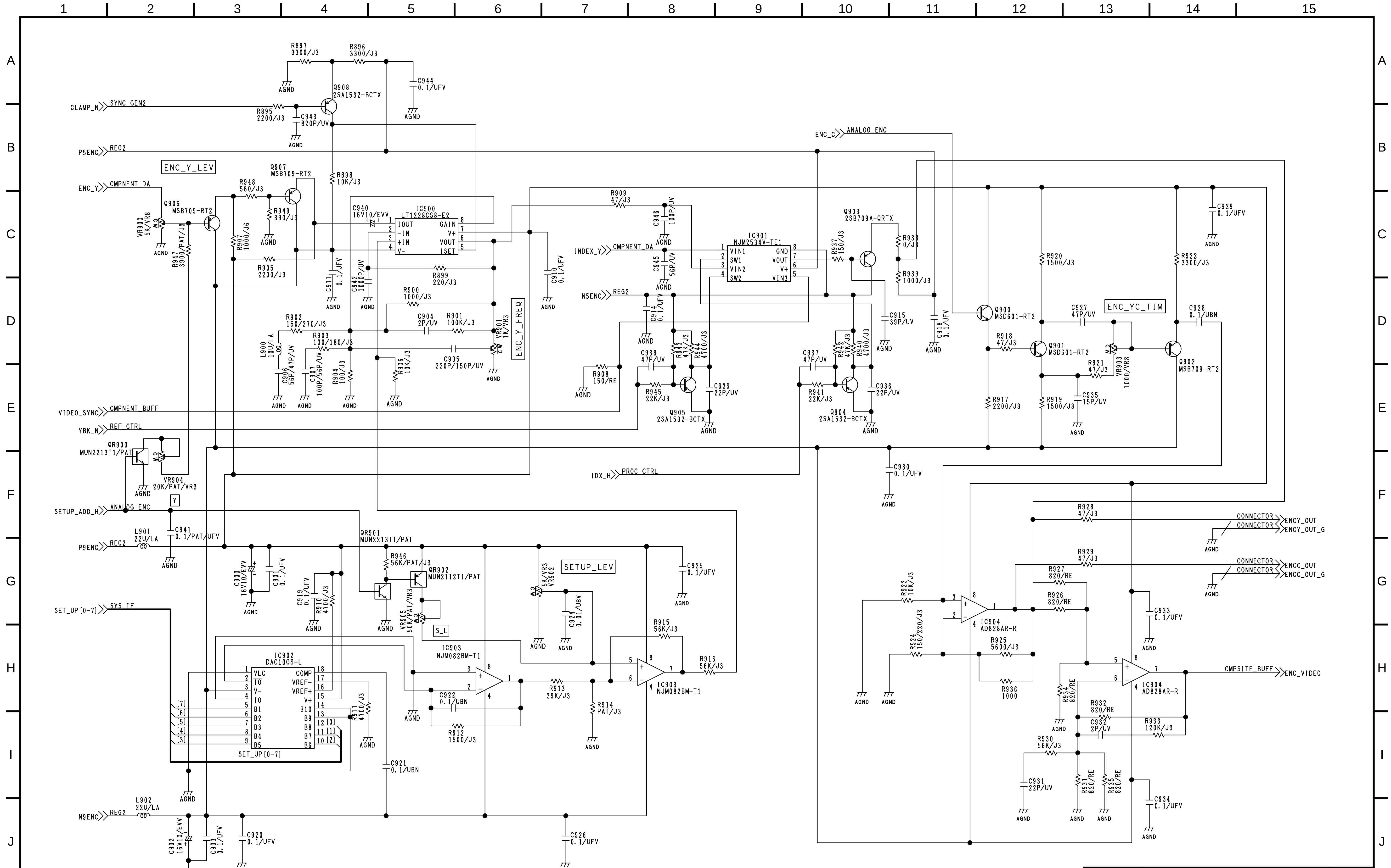
COMPONENT NAME	V OUT (SYNC BURST SEP)	22/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM055	


P5ENC
REG2
CLAMP_N
SYNC_GEN2
P9DA
P5DA
DA_Y[0-9]
DA_CR[0-9]
DA_CB[0-9]
REC601_DEC
CLK27MG
CLK_BUFF
N9DA
IC700
ADV7123KST50
IC702
LT1228CS8-E2
IC703
LT1228CS8-E2
IC704
LT1228CS8-E2
Q700 MSD601-RT2
Q701 MSB709-RT2
Q702 MSD601-RT2
Q703 MSD601-RT2
Q704 MSB709-RT2
Q711 MSD601-RT2
Q712 MSB709-RT2
Q724 2SA1532-BCTX
FL700 VLF1294-1
FL701 VLF1295-1
FL702 VLF1295-1
TG004 VJR0646
L700 220/LA
L701 VLQ0576T
L703 220/LA
R780 0/J6
(L702) (VLQ0576T)
Y_LEV
Y_FREQ
PR_DL
PR_LEV
PB_DL
PB_LEV
ENC_PR_PB_TIM
CMPNENT_BUFF
Y
YC_MIX
INDEX_Y
ENC_Y
CROUT_BUFF
CR
ANALOG_ENC
DAO_CR
CB
DAO_CB
AGND
DA_GND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

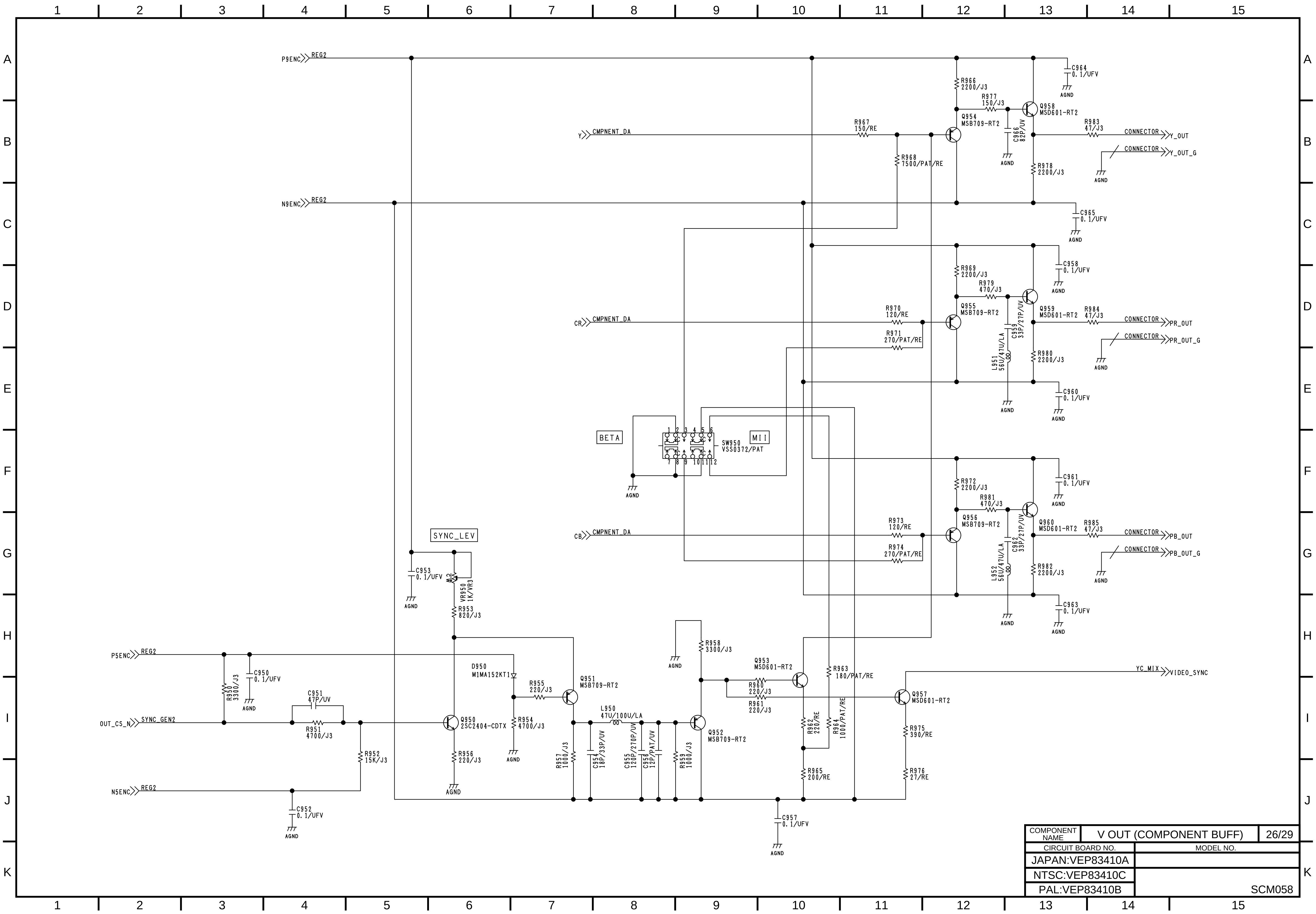
COMPONENT NAME	V OUT (COMPONENT DA)	23/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM055	


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
P5ENC REG2
L800 22U/LA
C800 0.1/UFV
C801 16V10/EVV
AGND
DAO_CR CMPNENT_DA
DAO_CB CMPNENT_DA
ENC_PR_LEV
ENC_PB_LEV
VR802 5K/VR8
VR803 5K/VR8
C820 16V10/EVV
R811 8200/4700/J3
C821 16V10/EVV
R812 4700/J3
C890 0.1/UFV
QR800 MUN2213T1/PAT
PR
VR809 20K/PAT/VR3
ADBF SYNC_GEN_2
L803 180U/39U/LA
L804 56U/120U/LA
C810 390P/56P/UV
C811 150P/180P/UV
R804 470/J3
QR801 MUN2213T1/PAT
VR810 20K/PAT/VR3
PB
SETUP_ADD_H SYS_IF
C895 0.1/PAT/UFV
RSC SYNC_GEN2
C824 0.1/UBN
R814 820/J3
BURST_LEV
BURST_PHASE
VR805 1000/VR8
R868 220/J3
VR808 PAT/1000/VR8
R877 PAT/22/J3
R876 0/PAT/J3
D810 M1MA152KT1
R880 3300/J3
R881 5600/J3
R883 47K/J3
R882 4700/J3
C893 0.1/UFV
VR806 2K/VR8
PB_BAL
D811 M1MA152KT1
R885 3300/J3
R886 5600/J3
R888 47K/J3
R887 4700/J3
C894 0.1/UFV
VR807 2K/VR8
PR_BAL
CW
CBK_L PROC_CTRL
CLAMP_N SYNC_GEN2
R884 2200/J3
R889 2200/J3
R878 300/RE
C877 0.1/UBN
L808 27U/15U/LA
C878 33P/27P/UV
C879 270P/220P/UV
L809 6R8U/5R6U/LA
C881 68P/27P/UV
C882 7P/PAT/UV
C880 22P/PAT/UV
C883 120P/100P/UV
L810 5R6U/6R8U/LA
C885 10P/47P/UV
C884 PAT/10P/UV
C886 PAT/33P/UV
YC_MIX ENC_C
R879 300/RE
C860 0.1/UFV
C875 16V10/EVV
C873 0.1/UFV
C876 0.047/UBN
R872 3300/J3
IC805 M51272FP-73A
RY_IN C3 BFP2 CB2 SC2 GND C_OUT CP_IN BP_IN C_SYNC V_OUT FB
BY_IN C1 BFP1 CB1 SC1 VREF VCC Y_IN C2 C_IN SU MOM
Q814 MSD601-RT2
C867 0.1/UFV
C869 6V47/EVV
P9ENC REG2
L801 22U/LA
C802 16V10/EVV
C803 0.1/UFV
C812 0.1/UFV
R805 4700/J3
HUE_PHASE
VR801 200/VR8
C817 0.01/UBV
C818 0.1/UFV
C825 0.1/UFV
L805 47U/LA
R815 180/J3
C827 22P/UV
C828 22P/UV
R816 820/J3
Q800 MSB709-RT2
R817 1500/J3
R818 47/J3
Q801 MSC2295-BT1
R819 1000/J3
C830 82P/UV
R822 1000/J3
R820 1000/J3
R821 1500/J3
C829 0.1/UFV
Q802 MSB709-RT2
R823 1500/J3
C831 0.1/UBN
C826 0.1/UFV
R867 1000/J3
C859 0.1/UFV
C861 0.047/UBN
C862 16V10/EVV
C864 0.1/UFV
C868 16V10/EVV
C870 0.047/UBN
C871 0.1/UFV
C865 0.1/UFV
C866 6V47/EVV
SYS_CS_P SYNC_GEN2
HUE[0-7] SYS_IF
IC801 DAC10GS-L
VLC I0 V- IO B1 B2 B3 B4 B5 COMP VREF- VREF+ V+ B10 B9 B8 B7 B6
[7] [6] [5] [4] [3] [0] [1] [2]
HUE[0-7]
C813 0.1/UFV
R806 4700/J3
IC802 NJM082BM-T1
C815 0.1/UBN
R807 1500/J3
R808 22K/J3
R809 PAT/J3
R810 56K/J3
C814 0.1/UBN
IC804 MC74HC4053FR
R891 PAT/1000/J3
R845 1000/PAT/J3
R849 1000/PAT/J3
R890 PAT/1000/J3
Q809 MSD601-RT2
Q805 MSB709-RT2
R837 1500/J3
R838 47/J3
R836 33K/J3
R839 0/PAT/J3
R834 33K/J3
R835 33K/J3
CBK_H PROC_CTRL
PAL_SW SYNC_GEN2
C844 0.1/UBN
L806 47U/LA
Q808 MSD601-RT2
C845 22P/UV
C846 22P/UV
R846 1000/J3
R847 47/J3
R848 3300/J3
C847 0.1/UBN
L807 47U/LA
R851 47/J3
C848 22P/UV
C849 22P/UV
R850 1000/J3
R852 3300/J3
C850 0.1/UFV
C851 0.1/UFV
N9ENC REG2
L802 22U/LA
C804 16V10/EVV
C805 0.1/UFV
C819 0.1/UFV
C832 0.1/UFV
R824 1000/J3
C836 0.1/UBN
R830 4700/J3
D800 MA335-RTX
D801 MA335-RTX
R832 150K/J3
C837 270P/UV
C838 150P/UV
C839 0.1/UBN
Q803 MSC2295-BT1
TH800 1000
ERTD2FHL102S
R827 1500/J3
R828 33/J3
R825 1000/J3
C834 10P/UV
R829 680/J3
R831 1M/J3
R833 1500/J3
Q804 MSB709-RT2
C835 0.1/UBN
R826 1500/J3
QUAD_PHASE
R840 1000/J3
C840 82P/UV
Q806 MSC2295-BT1
R843 180/100/J3
VR804 1000/VR8
R841 1000/J3
C841 0.1/UFV
R842 1000/J3
R844 1500/J3
C842 0.1/UFV
Q807 MSB709-RT2
C843 0.1/UFV
PAL_PHASE
C852 PAT/0.1/UFV
R853 PAT/10K/J3
Q810 PAT/XN6501-TX
R854 PAT/390/J3
R855 PAT/470/J3
Q811 PAT/MSC2295-BT1
VC800 PAT/20P
Q812 PAT/MSC2295-BT1
C855 PAT/0.1/UFV
C853 PAT/12P/UV
R860 PAT/5600/J3
R857 PAT/180/J3
R859 PAT/180/J3
R858 PAT/560/J3
R856 PAT/10K/J3
C854 PAT/0.1/UFV
R861 PAT/5600/J3
C856 PAT/0.1/UBV
R862 PAT/22K/J3
R863 PAT/22K/J3
R864 PAT/22K/J3
Q813 PAT/MSB709-RT2
R865 PAT/1500/J3
R866 PAT/47/J3
C857 0.1/UFV
C858 0.1/UFV
N5ENC REG2
C833 0.1/UFV

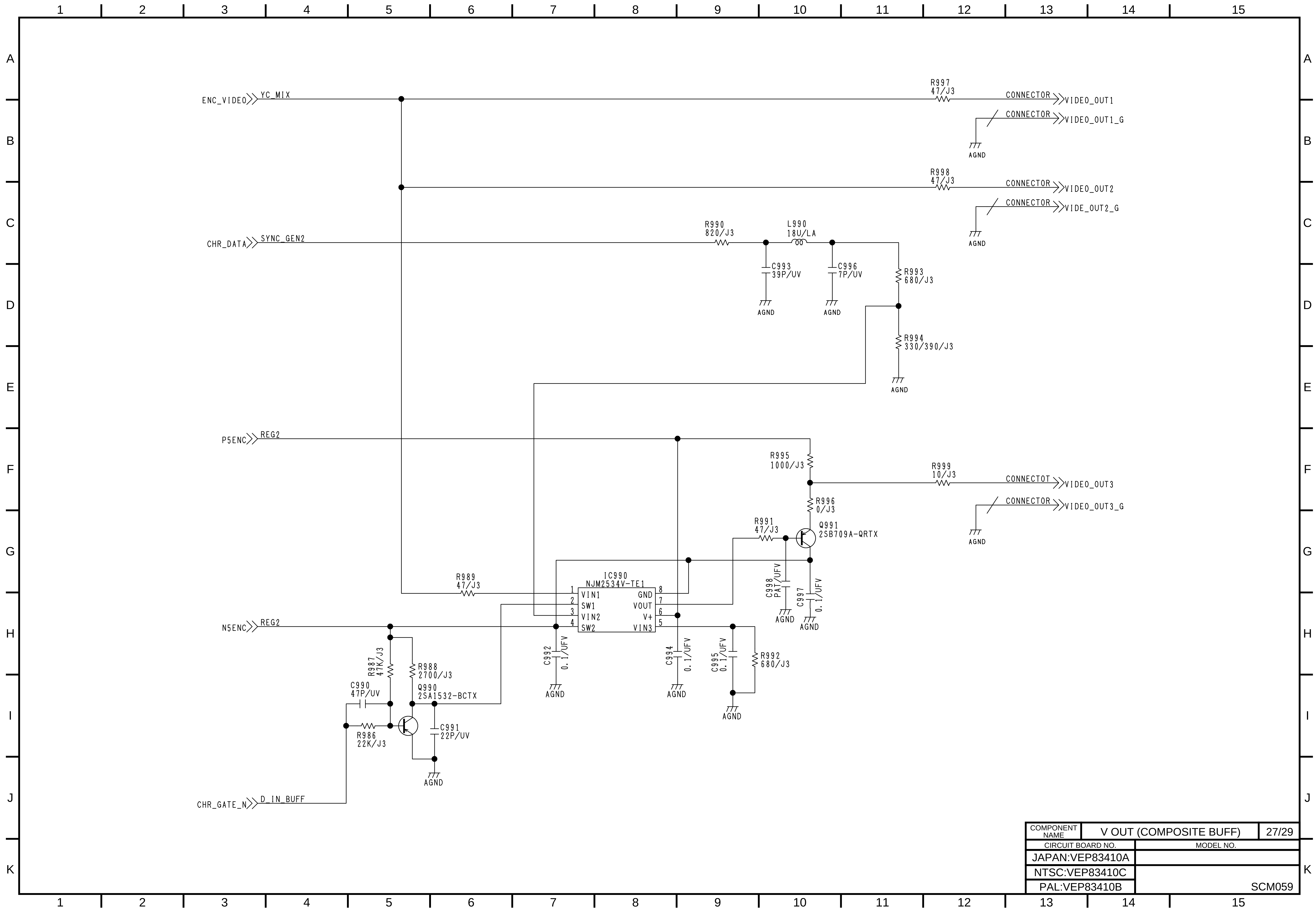
COMPONENT NAME	V OUT (ANALOG ENC)	24/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM056	


CLAMP_N
SYNC_GEN2
P5ENC
REG2
ENC_Y
CMPNENT_DA
ENC_Y_LEV
VIDEO_SYNC
CMPNENT_BUFF
YBK_N
REF_CTRL
SETUP_ADD_H
ANALOG_ENC
P9ENC
SET_UP[0-7]
SYS_IF
N9ENC
INDEX_Y
N5ENC
ENC_C
IDX_H
PROC_CTRL
ENC_Y_FREQ
ENC_YC_TIM
SETUP_LEV
S_L
Y
R897 3300/J3
R896 3300/J3
C944 0.1/UFV
Q908 2SA1532-BCTX
R895 2200/J3
C943 820P/UV
Q907 MSB709-RT2
R948 560/J3
R949 390/J3
Q906 MSB709-RT2
VR900 5K/VR8
R947 3900/PAT/J3
R907 1000/J6
R905 2200/J3
R898 10K/J3
C940 16V10/EVV
IC900 LT1228CS8-E2
IOUT
-IN
+IN
V-
GAIN
V+
VOUT
ISET
C911 0.1/UFV
C942 100P/UV
R899 220/J3
R900 1000/J3
R902 150/270/J3
R903 100/180/J3
C904 2P/UV
R901 100K/J3
VR901 1K/VR3
C905 220P/150P/UV
L900 10U/LA
C906 56P/47P/UV
C907 100P/56P/UV
R904 100/J3
R906 10K/J3
R909 47/J3
C910 0.1/UFV
C946 100P/UV
C945 56P/UV
IC901 NJM2534V-TE1
VIN1
SW1
VIN2
SW2
GND
VOUT
V+
VIN3
C914 0.1/UFV
R908 150/RE
C938 47P/UV
R943 47K/J3
R944 4700/J3
R945 22K/J3
C939 22P/UV
Q905 2SA1532-BCTX
R937 150/J3
Q903 2SB709A-QRTX
R938 0/J3
R939 1000/J3
C915 39P/UV
C918 0.1/UFV
C937 47P/UV
R942 47K/J3
R940 4700/J3
R941 22K/J3
C936 22P/UV
Q904 2SA1532-BCTX
Q900 MSD601-RT2
R920 1500/J3
R922 3300/J3
C929 0.1/UFV
C927 47P/UV
C928 0.1/UBN
R918 47/J3
Q901 MSD601-RT2
VR903 1000/VR8
Q902 MSB709-RT2
R921 47/J3
C935 15P/UV
R917 2200/J3
R919 1500/J3
C930 0.1/UFV
QR900 MUN2213T1/PAT
VR904 20K/PAT/VR3
L901 22U/LA
C941 0.1/PAT/UFV
C900 16V10/EVV
C901 0.1/UFV
QR901 MUN2213T1/PAT
R946 56K/PAT/J3
QR902 MUN2112T1/PAT
C919 0.1/UFV
R910 4700/J3
VR905 50K/PAT/VR3
VR902 5K/VR3
C924 0.01/UBV
C925 0.1/UFV
IC902 DAC10GS-L
VLC
IO
V-
B1
B2
B3
B4
B5
COMP
VREF-
VREF+
V+
B10
B9
B8
B7
B6
IC903 NJM082BM-T1
C922 0.1/UBN
R912 1500/J3
R913 39K/J3
R914 PAT/J3
R915 56K/J3
R916 56K/J3
R911 4700/J3
C921 0.1/UBN
L902 22U/LA
C902 16V10/EVV
C903 0.1/UFV
C920 0.1/UFV
C926 0.1/UFV
R928 47/J3
R929 47/J3
CONNECTOR
ENCY_OUT
ENCY_OUT_G
ENCC_OUT
ENCC_OUT_G
R927 820/RE
R926 820/RE
R923 10K/J3
R924 150/220/J3
IC904 AD828AR-R
R925 5600/J3
R936 1000
C933 0.1/UFV
CMPSITE_BUFF
ENC_VIDEO
R934 820/RE
R932 820/RE
C932 2P/UV
R933 120K/J3
R930 56K/J3
C931 22P/UV
R931 820/RE
R935 820/RE
C934 0.1/UFV
AGND

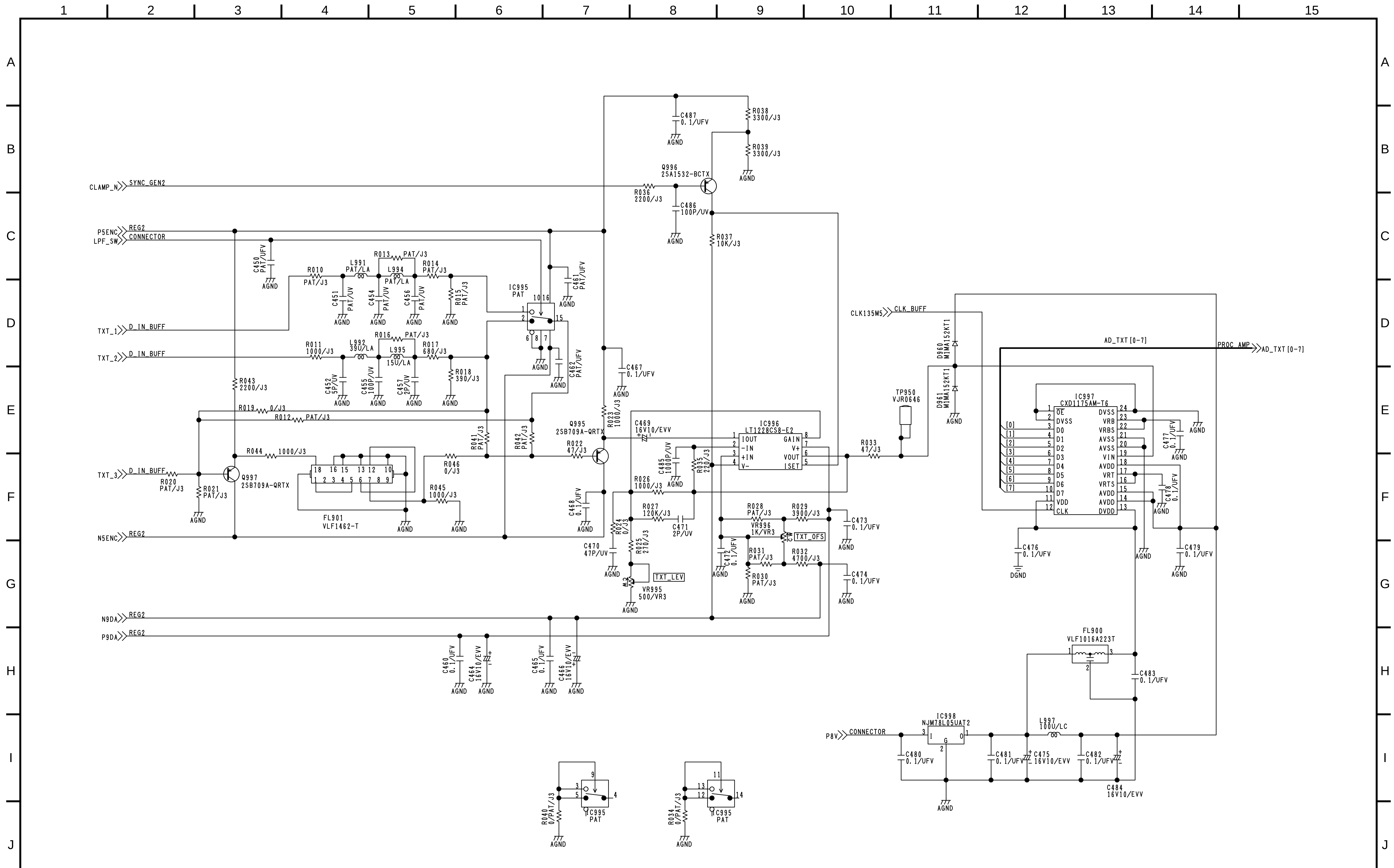
COMPONENT NAME	V OUT (YC MIX)	25/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM057	


P9ENC
REG2
N9ENC
REG2
Y
CMPNENT_DA
CR
CMPNENT_DA
CB
CMPNENT_DA
R967
150/RE
R968
7500/PAT/RE
R966
2200/J3
R977
150/J3
Q954
MSB709-RT2
Q958
MSD601-RT2
C966
82P/UV
C964
0.1/UFV
R983
47/J3
CONNECTOR
Y_OUT
CONNECTOR
Y_OUT_G
R978
2200/J3
C965
0.1/UFV
R969
2200/J3
R979
470/J3
Q955
MSB709-RT2
Q959
MSD601-RT2
C958
0.1/UFV
R970
120/RE
R971
270/PAT/RE
C959
33P/27P/UV
L951
56U/47U/LA
R984
47/J3
CONNECTOR
PR_OUT
CONNECTOR
PR_OUT_G
R980
2200/J3
C960
0.1/UFV
BETA
MII
SW950
VSS0372/PAT
1 2 3 4 5 6
7 8 9 10 11 12
R972
2200/J3
R981
470/J3
Q956
MSB709-RT2
Q960
MSD601-RT2
C961
0.1/UFV
R973
120/RE
R974
270/PAT/RE
C962
33P/27P/UV
L952
56U/47U/LA
R985
47/J3
CONNECTOR
PB_OUT
CONNECTOR
PB_OUT_G
R982
2200/J3
C963
0.1/UFV
SYNC_LEV
C953
0.1/UFV
VR950
1K/VR3
R953
820/J3
P5ENC
REG2
R950
3300/J3
C950
0.1/UFV
OUT_CS_N
SYNC_GEN2
C951
47P/UV
R951
4700/J3
R952
15K/J3
N5ENC
REG2
C952
0.1/UFV
Q950
2SC2404-CDTX
R956
220/J3
D950
M1MA152KT1
R955
220/J3
R954
4700/J3
Q951
MSB709-RT2
L950
47U/100U/LA
R957
1000/J3
C954
18P/33P/UV
C955
120P/270P/UV
C956
12P/PAT/UV
R959
1000/J3
Q952
MSB709-RT2
R958
3300/J3
Q953
MSD601-RT2
R960
220/J3
R961
220/J3
R962
220/RE
R963
180/PAT/RE
R964
1000/PAT/RE
R965
200/RE
C957
0.1/UFV
Q957
MSD601-RT2
R975
390/RE
R976
27/RE
YC_MIX
VIDEO_SYNC
AGND

COMPONENT NAME	V OUT (COMPONENT BUFF)	26/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM058	


ENC_VIDEO
YC_MIX
R997
47/J3
CONNECTOR
VIDEO_OUT1
CONNECTOR
VIDEO_OUT1_G
AGND
R998
47/J3
CONNECTOR
VIDEO_OUT2
CONNECTOR
VIDE_OUT2_G
AGND
CHR_DATA
SYNC_GEN2
R990
820/J3
L990
18U/LA
C993
39P/UV
AGND
C996
7P/UV
AGND
R993
680/J3
R994
330/390/J3
AGND
P5ENC
REG2
R995
1000/J3
R999
10/J3
CONNECTOT
VIDEO_OUT3
R996
0/J3
CONNECTOR
VIDEO_OUT3_G
AGND
R991
47/J3
Q991
2SB709A-QRTX
C998
PAT/UFV
AGND
C997
0.1/UFV
AGND
R989
47/J3
IC990
NJM2534V-TE1
1 VIN1
2 SW1
3 VIN2
4 SW2
8 GND
7 VOUT
6 V+
5 VIN3
N5ENC
REG2
R987
47K/J3
R988
2700/J3
Q990
2SA1532-BCTX
C990
47P/UV
R986
22K/J3
C991
22P/UV
AGND
C992
0.1/UFV
AGND
C994
0.1/UFV
AGND
C995
0.1/UFV
R992
680/J3
AGND
CHR_GATE_N
D_IN_BUFF

COMPONENT NAME	V OUT (COMPOSITE BUFF)	27/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM059	



CLAMP_N
SYNC_GEN2
P5ENC
REG2
LPF_SW
CONNECTOR
TXT_1
D_IN_BUFF
TXT_2
D_IN_BUFF
TXT_3
D_IN_BUFF
N5ENC
REG2
N9DA
REG2
P9DA
REG2
C450 PAT/UFV
R010 PAT/J3
L991 PAT/LA
R013 PAT/J3
L994 PAT/LA
R014 PAT/J3
C451 PAT/UV
C454 PAT/UV
C456 PAT/UV
R015 PAT/J3
IC995 PAT
C461 PAT/UFV
R011 1000/J3
L992 390U/LA
R016 PAT/J3
L995 15U/LA
R017 680/J3
R018 390/J3
C452 5P/UV
C455 100P/UV
C457 2P/UV
C462 PAT/UFV
R043 2200/J3
R019 0/J3
R012 PAT/J3
R044 1000/J3
R020 PAT/J3
R021 PAT/J3
Q997 2SB709A-QRTX
FL901 VLF1462-T
R046 0/J3
R045 1000/J3
R041 PAT/J3
R042 PAT/J3
Q995 2SB709A-QRTX
R022 47/J3
R023 1000/J3
C467 0.1/UFV
C468 0.1/UFV
C487 0.1/UFV
R038 3300/J3
R039 3300/J3
Q996 2SA1532-BCTX
R036 2200/J3
C486 100P/UV
R037 10K/J3
C469 16V10/EVV
IC996 LT1228CS8-E2
IOUT
-IN
+IN
V-
GAIN
V+
VOUT
ISET
C485 100P/UV
R035 220/J3
R026 1000/J3
R027 120K/J3
C471 2P/UV
R024 0/J3
C470 47P/UV
R025 270/J3
TXT_LEV
VR995 500/VR3
R028 PAT/J3
R029 3900/J3
VR996 1K/VR3
TXT_OFS
C472 0.1/UFV
R031 PAT/J3
R032 4700/J3
R030 PAT/J3
C473 0.1/UFV
C474 0.1/UFV
R033 47/J3
TP950 VJR0646
CLK135M5
CLK_BUFF
D960 M1MA152KT1
D961 M1MA152KT1
AD_TXT[0-7]
PROC_AMP
AD_TXT[0-7]
IC997 CXD1175AM-T6
OE
DVSS
D0
D1
D2
D3
D4
D5
D6
D7
VDD
CLK
DVSS
VRB
VRBS
AVSS
AVSS
VIN
AVDD
VRT
VRTS
AVDD
AVDD
DVDD
C477 0.1/UFV
C478 0.1/UFV
C476 0.1/UFV
C479 0.1/UFV
DGND
FL900 VLF1016A223T
C483 0.1/UFV
P8V
CONNECTOR
IC998 NJM78L05UAT2
L997 100U/LC
C480 0.1/UFV
C481 0.1/UFV
C475 16V10/EVV
C482 0.1/UFV
C484 16V10/EVV
C460 0.1/UFV
C464 16V10/EVV
C465 0.1/UFV
C466 16V10/EVV
R040 0/PAT/J3
IC995 PAT
R034 0/PAT/J3
IC995 PAT
AGND

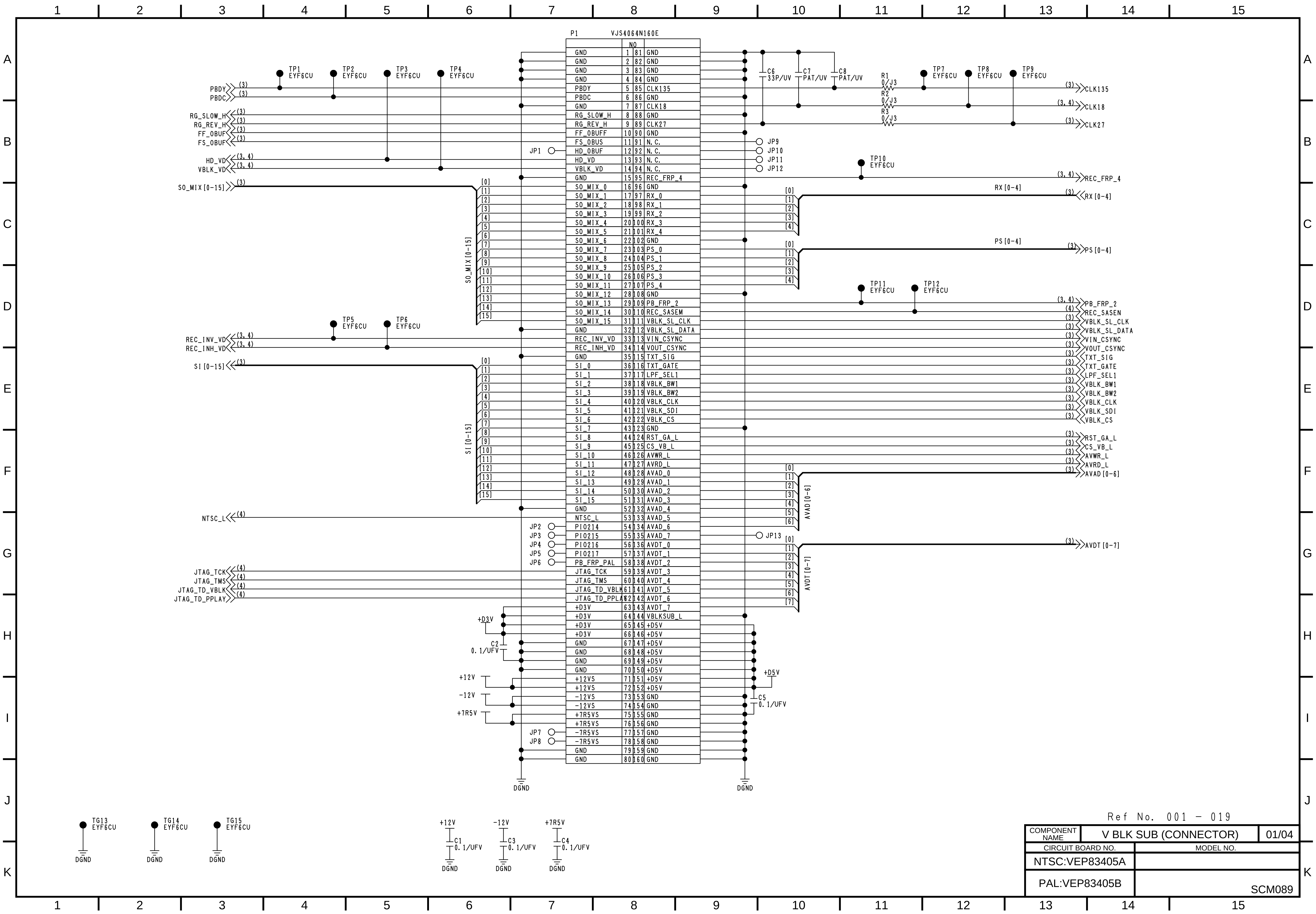
COMPONENT NAME	V OUT (TXT AD)	28/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM060	

Ref No.	NTSC-OVERSEAS	NTSC-JAPAN	PAL
C090	-----	-----	ECUV1H151JCV
C107	ECUV1H102JV	ECUV1H102JV	ECUV1H181JCV
C150	-----	-----	ECUV1E104ZFV
C151	-----	-----	ECUV1E104ZFV
C152	-----	-----	ECUV1H103KBV
C153	-----	-----	ECUV1H103KBV
C154	-----	-----	ECEV1HN010QR
C155	-----	-----	ECUV1H102JCV
C156	-----	-----	ECUV1E104ZFV
C157	-----	-----	ECUV1E104ZFV
C166	ECUV1H470JCV	ECUV1H470JCV	ECUV1H270JCV
C167	ECUV1H470JCV	ECUV1H470JCV	ECUV1H270JCV
C250	-----	-----	ECUV1E104ZFV
C251	-----	-----	ECUV1E104ZFV
C252	-----	-----	ECUV1H103KBV
C253	-----	-----	ECUV1H103KBV
C254	-----	-----	ECEV1HN010QR
C255	-----	-----	ECUV1H102JCV
C256	-----	-----	ECUV1E104ZFV
C721	ECUV1H470JCV	ECUV1H470JCV	ECUV1H560JCV
C730	ECUV1H820JCV	ECUV1H820JCV	ECUV1H680JCV
C736	ECUV1H221JCV	ECUV1H221JCV	-----
C750	ECUV1H820JCV	ECUV1H820JCV	ECUV1H680JCV
C754	ECUV1H221JCV	ECUV1H221JCV	ECUV1H331JCV
C755	ECUV1H221JCV	ECUV1H221JCV	-----
C810	ECUV1H391JCV	ECUV1H391JCV	ECUV1H560JCV
C811	ECUV1H151JCV	ECUV1H151JCV	ECUV1H181JCV
C852	-----	-----	ECUV1E104ZFV
C853	-----	-----	ECUV1H120JCV
C854	-----	-----	ECUV1E104ZFV
C855	-----	-----	ECUV1E104ZFV
C856	-----	-----	ECUV1C104KBV
C878	ECUV1H330JCV	ECUV1H330JCV	ECUV1H270JCV
C879	ECUV1H271JCV	ECUV1H271JCV	ECUV1H221JCV
C880	ECUV1H220JCV	ECUV1H220JCV	-----
C881	ECUV1H680JCV	ECUV1H680JCV	ECUV1H270JCV
C882	ECUV1H070DCV	ECUV1H070DCV	-----
C883	ECUV1H121JCV	ECUV1H121JCV	ECUV1H101JCV
C884	-----	-----	ECUV1H100DCV
C885	ECUV1H100DCV	ECUV1H100DCV	ECUV1H470JCV
C886	-----	-----	ECUV1H330JCV
C895	ECUV1E104ZFV	-----	-----
C905	ECUV1H221JCV	ECUV1H221JCV	ECUV1H151JCV
C906	ECUV1H560JCV	ECUV1H560JCV	ECUV1H470JCV
C907	ECUV1H101JCV	ECUV1H101JCV	ECUV1H560JCV
C941	ECUV1E104ZFV	-----	-----
C954	ECUV1H180JCV	ECUV1H180JCV	ECUV1H330JCV
C955	ECUV1H121JCV	ECUV1H121JCV	ECUV1H271JCV
C956	ECUV1H120JCV	ECUV1H120JCV	-----
C959	ECUV1H330JCV	ECUV1H330JCV	ECUV1H270JCV
C962	ECUV1H330JCV	ECUV1H330JCV	ECUV1H270JCV
D150	-----	-----	M1MA152KT1
D250	-----	-----	M1MA152KT1
IC150	-----	-----	MC74HC125AFR
IC151	-----	-----	NJM082BM-T1
IC251	-----	-----	NJM082BM-T1
IC340	VSI2888	VSI2888	VSI2889
IC371	VSI2884	VSI2884	VSI2885
IC587	VSI2886	VSI2886	VSI2887

Ref No.	NTSC-OVERSEAS	NTSC-JAPAN	PAL
L650	VLQ0163J680	VLQ0163J680	VLQ0163J390
L708	VLQ0163J2R7	VLQ0163J2R7	VLQ0163J2R2
L712	VLQ0163J2R7	VLQ0163J2R7	VLQ0163J2R2
L803	VLQ0163J181	VLQ0163J181	VLQ0163J390
L804	VLQ0163J560	VLQ0163J560	VLQ0163J121
L808	VLQ0163J270	VLQ0163J270	VLQ0163J150
L809	VLQ0163J6R8	VLQ0163J6R8	VLQ0163J5R6
L810	VLQ0163J5R6	VLQ0163J5R6	VLQ0163J6R8
L950	VLQ0163J470	VLQ0163J470	VLQ0163J101
L951	VLQ0163J560	VLQ0163J560	VLQ0163J470
L952	VLQ0163J560	VLQ0163J560	VLQ0163J470
Q810	-----	-----	XN6501-TX
Q811	-----	-----	MSC2295-BT1
Q812	-----	-----	MSC2295-BT1
Q813	-----	-----	MSB709-RT2
QR800	MUN2213T1	-----	-----
QR801	MUN2213T1	-----	-----
QR900	MUN2213T1	-----	-----
QR901	MUN2213T1	-----	-----
QR902	MUN2112T1	-----	-----
R057	ERJ3GEYJ101V	ERJ3GEYJ101V	-----
R059	ERJ3GEYJ101V	ERJ3GEYJ101V	-----
R070	ERJ3GEYJ153V	ERJ3GEYJ153V	ERJ3GEYJ183V
R076	ERJ3GEYJ821V	ERJ3GEYJ821V	ERJ3GEYJ471V
R077	ERJ3GEYJ223V	ERJ3GEYJ223V	ERJ3GEYJ153V
R095	-----	-----	ERJ3GEYJ102V
R096	-----	-----	ERJ3GEYJ102V
R097	-----	-----	ERJ3GEYJ102V
R099	-----	-----	ERJ3GEYJ222V
R131	ERJ3GEYJ822V	ERJ3GEYJ822V	ERJ3GEYJ562V
R132	ERJ3GEYJ153V	ERJ3GEYJ153V	ERJ3GEYJ332V
R140	ERJ3GEY0R00V	ERJ3GEY0R00V	-----
R141	-----	-----	ERJ3GEY0R00V
R150	-----	-----	ERJ3GEYJ471V
R151	-----	-----	ERJ3GEYJ333V
R152	-----	-----	ERJ3GEYJ103V
R153	-----	-----	ERJ3GEYJ103V
R154	-----	-----	ERJ3GEYJ223V
R155	-----	-----	ERJ3GEYJ105V
R156	-----	-----	ERJ3GEYJ102V
R157			ERJ3GEYJ102V
R158	ERJ3GEYJ102V	ERJ3GEYJ102V	-----
R242	ERJ6RBD822V	ERJ6RBD822V	ERJ6RBD682V
R243	ERJ3GEYJ102V	ERJ3GEYJ102V	ERJ3GEYJ222V
R245	-----	-----	ERJ3GEY0R00V
R250	-----	-----	ERJ3GEYJ471V
R251	-----	-----	ERJ3GEYJ333V
R252	-----	-----	ERJ3GEYJ103V
R253	-----	-----	ERJ3GEYJ103V
R254	-----	-----	ERJ3GEYJ332V
R255	-----	-----	ERJ3GEYJ105V
R256	-----	-----	ERJ3GEYJ102V
R258	ERJ3GEYJ102V	ERJ3GEYJ102V	-----
R263	ERJ3GEYJ103V	ERJ3GEYJ103V	ERJ3GEYJ472V
R591	-----	-----	ERJ3GEYJ101V
R709	ERJ3GEYJ151V	ERJ3GEYJ151V	ERJ3GEYJ181V
R718	ERJ3GEYJ151V	ERJ3GEYJ151V	ERJ3GEYJ271V
R724	ERJ3GEYJ221V	ERJ3GEYJ221V	ERJ3GEYJ181V
R737	ERJ3GEYJ181V	ERJ3GEYJ181V	ERJ3GEYJ151V

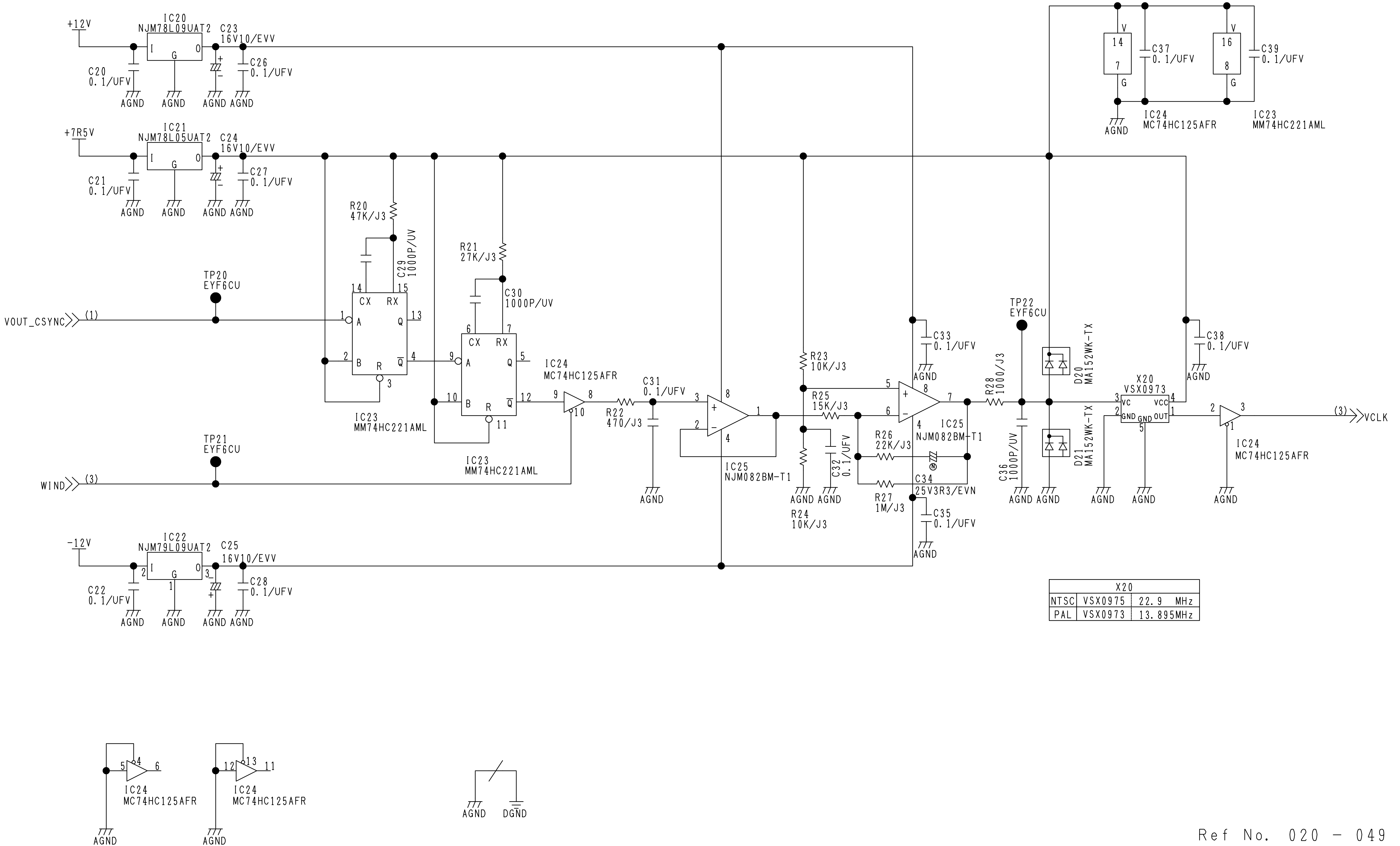
Ref No.	NTSC-OVERSEAS	NTSC-JAPAN	PAL
R738	ERJ3GEYJ121V	ERJ3GEYJ121V	-----
R739	ERJ3GEYJ820V	ERJ3GEYJ820V	ERJ3GEYJ181V
R768	ERJ3GEYJ121V	ERJ3GEYJ121V	ERJ3GEYJ270V
R769	ERJ3GEYJ121V	ERJ3GEYJ121V	-----
R770	ERJ3GEYJ820V	ERJ3GEYJ820V	ERJ3GEYJ121V
R799	ERJ6RBD752V	ERJ6RBD752V	-----
R811	ERJ3GEYJ822V	ERJ3GEYJ822V	ERJ3GEYJ472V
R839	ERJ3GEY0R00V	ERJ3GEY0R00V	-----
R843	ERJ3GEYJ181V	ERJ3GEYJ181V	ERJ3GEYJ101V
R845	ERJ3GEYJ102V	ERJ3GEYJ102V	-----
R849	ERJ3GEYJ102V	ERJ3GEYJ102V	-----
R853	-----	-----	ERJ3GEYJ103V
R854	-----	-----	ERJ3GEYJ391V
R855	-----	-----	ERJ3GEYJ471V
R856	-----	-----	ERJ3GEYJ103V
R857	-----	-----	ERJ3GEYJ181V
R858	-----	-----	ERJ3GEYJ561V
R859	-----	-----	ERJ3GEYJ181V
R860	-----	-----	ERJ3GEYJ562V
R861	-----	-----	ERJ3GEYJ562V
R862	-----	-----	ERJ3GEYJ223V
R863	-----	-----	ERJ3GEYJ223V
R864	-----	-----	ERJ3GEYJ223V
R865	-----	-----	ERJ3GEYJ152V
R866	-----	-----	ERJ3GEYJ470V
R876	ERJ3GEY0R00V	ERJ3GEY0R00V	-----
R877	-----	-----	ERJ3GEYJ221V
R890	-----	-----	ERJ3GEYJ102V
R891	-----	-----	ERJ3GEYJ102V
R902	ERJ3GEYJ151V	ERJ3GEYJ151V	ERJ3GEYJ271V
R903	ERJ3GEYJ101V	ERJ3GEYJ101V	ERJ3GEYJ181V
R924	ERJ3GEYJ151V	ERJ3GEYJ151V	ERJ3GEYJ221V
R946	ERJ3GEYJ563V	-----	-----
R947	ERJ3GEYJ392V	-----	-----
R963	ERJ6RBD181V	ERJ6RBD181V	-----
R964	ERJ6RBD102V	ERJ6RBD102V	-----
R968	ERJ6RBD752V	ERJ6RBD752V	-----
R971	ERJ6RBD271V	ERJ6RBD271V	-----
R974	ERJ6RBD271V	ERJ6RBD271V	-----
R994	ERJ3GEYJ331V	ERJ3GEYJ331V	ERJ3GEYJ391V
SW950	VSS0372	VSS0372	-----
VC800	-----	-----	ECV1ZW20X53T
VR808	-----	-----	VRV0161B102T
VR809	VRV0113B203T	-----	-----
VR810	VRV0113B203T	-----	-----
VR904	VRV0113B203T	-----	-----
VR905	VRV0113B503T	-----	-----
X070	VSX0081	VSX0081	VSX0363
X150	-----	-----	VSX0567A
X160	VSX0338	VSX0338	VSX0270
X250	-----	-----	VSX0567A
X280	VSX0338	VSX0338	VSX0270

COMPONENT NAME	V OUT (COMPARISON CHART)	29/29
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83410A		
NTSC:VEP83410C		
PAL:VEP83410B	SCM061	


P1 VJS4064N160E
NO
1 GND 81 GND
2 GND 82 GND
3 GND 83 GND
4 GND 84 GND
5 PBDY 85 CLK135
6 PBDC 86 GND
7 GND 87 CLK18
8 RG_SLOW_H 88 GND
9 RG_REV_H 89 CLK27
10 FF_OBUFF 90 GND
11 FS_OBUS 91 N.C.
12 HD_OBUF 92 N.C.
13 HD_VD 93 N.C.
14 VBLK_VD 94 N.C.
15 GND 95 REC_FRP_4
16 SO_MIX_0 96 GND
17 SO_MIX_1 97 RX_0
18 SO_MIX_2 98 RX_1
19 SO_MIX_3 99 RX_2
20 SO_MIX_4 100 RX_3
21 SO_MIX_5 101 RX_4
22 SO_MIX_6 102 GND
23 SO_MIX_7 103 PS_0
24 SO_MIX_8 104 PS_1
25 SO_MIX_9 105 PS_2
26 SO_MIX_10 106 PS_3
27 SO_MIX_11 107 PS_4
28 SO_MIX_12 108 GND
29 SO_MIX_13 109 PB_FRP_2
30 SO_MIX_14 110 REC_SASEM
31 SO_MIX_15 111 VBLK_SL_CLK
32 GND 112 VBLK_SL_DATA
33 REC_INV_VD 113 VIN_CSYNC
34 REC_INH_VD 114 VOUT_CSYNC
35 GND 115 TXT_SIG
36 SI_0 116 TXT_GATE
37 SI_1 117 LPF_SEL1
38 SI_2 118 VBLK_BW1
39 SI_3 119 VBLK_BW2
40 SI_4 120 VBLK_CLK
41 SI_5 121 VBLK_SDI
42 SI_6 122 VBLK_CS
43 SI_7 123 GND
44 SI_8 124 RST_GA_L
45 SI_9 125 CS_VB_L
46 SI_10 126 AVWR_L
47 SI_11 127 AVRD_L
48 SI_12 128 AVAD_0
49 SI_13 129 AVAD_1
50 SI_14 130 AVAD_2
51 SI_15 131 AVAD_3
52 GND 132 AVAD_4
53 NTSC_L 133 AVAD_5
54 PIO214 134 AVAD_6
55 PIO215 135 AVAD_7
56 PIO216 136 AVDT_0
57 PIO217 137 AVDT_1
58 PB_FRP_PAL 138 AVDT_2
59 JTAG_TCK 139 AVDT_3
60 JTAG_TMS 140 AVDT_4
61 JTAG_TD_VBLK 141 AVDT_5
62 JTAG_TD_PPLAY 142 AVDT_6
63 +D3V 143 AVDT_7
64 +D3V 144 VBLKSUB_L
65 +D3V 145 +D5V
66 +D3V 146 +D5V
67 GND 147 +D5V
68 GND 148 +D5V
69 GND 149 +D5V
70 GND 150 +D5V
71 +12VS 151 +D5V
72 +12VS 152 +D5V
73 -12VS 153 GND
74 -12VS 154 GND
75 +7R5VS 155 GND
76 +7R5VS 156 GND
77 -7R5VS 157 GND
78 -7R5VS 158 GND
79 GND 159 GND
80 GND 160 GND
PBDY (3)
PBDC (3)
RG_SLOW_H (3)
RG_REV_H (3)
FF_OBUF (3)
FS_OBUF (3)
HD_VD (3, 4)
VBLK_VD (3, 4)
SO_MIX[0-15] (3)
REC_INV_VD (3, 4)
REC_INH_VD (3, 4)
SI[0-15] (3)
NTSC_L (4)
JTAG_TCK (4)
JTAG_TMS (4)
JTAG_TD_VBLK (4)
JTAG_TD_PPLAY (4)
TP1 EYF6CU
TP2 EYF6CU
TP3 EYF6CU
TP4 EYF6CU
TP5 EYF6CU
TP6 EYF6CU
TP7 EYF6CU
TP8 EYF6CU
TP9 EYF6CU
TP10 EYF6CU
TP11 EYF6CU
TP12 EYF6CU
JP1
JP2
JP3
JP4
JP5
JP6
JP7
JP8
JP9
JP10
JP11
JP12
JP13
C6 33P/UV
C7 PAT/UV
C8 PAT/UV
R1 0/J3
R2 0/J3
R3 0/J3
(3) CLK135
(3, 4) CLK18
(3) CLK27
(3, 4) REC_FRP_4
RX[0-4]
(3) RX[0-4]
PS[0-4]
(3) PS[0-4]
(3, 4) PB_FRP_2
(4) REC_SASEM
(3) VBLK_SL_CLK
(3) VBLK_SL_DATA
(3) VIN_CSYNC
(3) VOUT_CSYNC
(3) TXT_SIG
(3) TXT_GATE
(3) LPF_SEL1
(3) VBLK_BW1
(3) VBLK_BW2
(3) VBLK_CLK
(3) VBLK_SDI
(3) VBLK_CS
(3) RST_GA_L
(3) CS_VB_L
(3) AVWR_L
(3) AVRD_L
(3) AVAD[0-6]
AVAD[0-6]
(3) AVDT[0-7]
AVDT[0-7]
SO_MIX[0-15]
SI[0-15]
+D3V
C2 0.1/UFV
+12V
-12V
+7R5V
+D5V
C5 0.1/UFV
DGND
TG13 EYF6CU
TG14 EYF6CU
TG15 EYF6CU
+12V C1 0.1/UFV
-12V C3 0.1/UFV
+7R5V C4 0.1/UFV
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

Ref No. 001 - 019

COMPONENT NAME	V BLK SUB (CONNECTOR)	01/04
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83405A		
PAL:VEP83405B	SCM089	

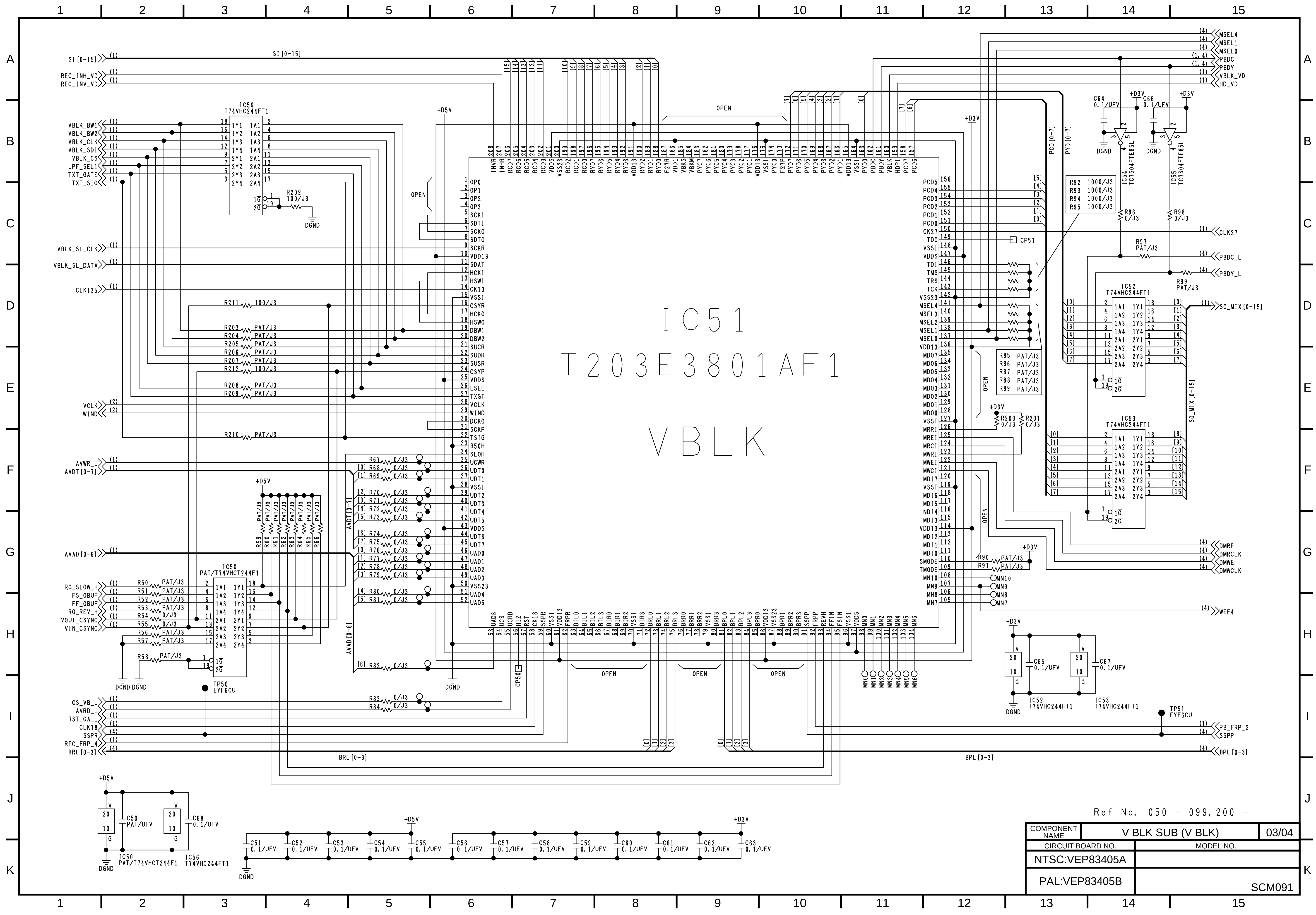


+12V
IC20
NJM78L09UAT2
C23
16V10/EVV
C20
0.1/UFV
C26
0.1/UFV
AGND
+7R5V
IC21
NJM78L05UAT2
C24
16V10/EVV
C21
0.1/UFV
C27
0.1/UFV
R20
47K/J3
C29
1000P/UV
R21
27K/J3
C30
1000P/UV
TP20
EYF6CU
VOUT_CSYNC
(1)
IC23
MM74HC221AML
IC24
MC74HC125AFR
R22
470/J3
C31
0.1/UFV
IC25
NJM082BM-T1
R23
10K/J3
R25
15K/J3
R24
10K/J3
C32
0.1/UFV
R26
22K/J3
R27
1M/J3
C34
25V3R3/EVN
C33
0.1/UFV
C35
0.1/UFV
R28
1000/J3
TP22
EYF6CU
C36
1000P/UV
D20
MA152WK-TX
D21
MA152WK-TX
X20
VSX0973
C38
0.1/UFV
(3)
VCLK
TP21
EYF6CU
WIND
-12V
IC22
NJM79L09UAT2
C25
16V10/EVV
C22
0.1/UFV
C28
0.1/UFV
C37
0.1/UFV
C39
0.1/UFV
DGND

X20		
NTSC	VSX0975	22.9 MHz
PAL	VSX0973	13.895MHz

Ref No. 020 - 049

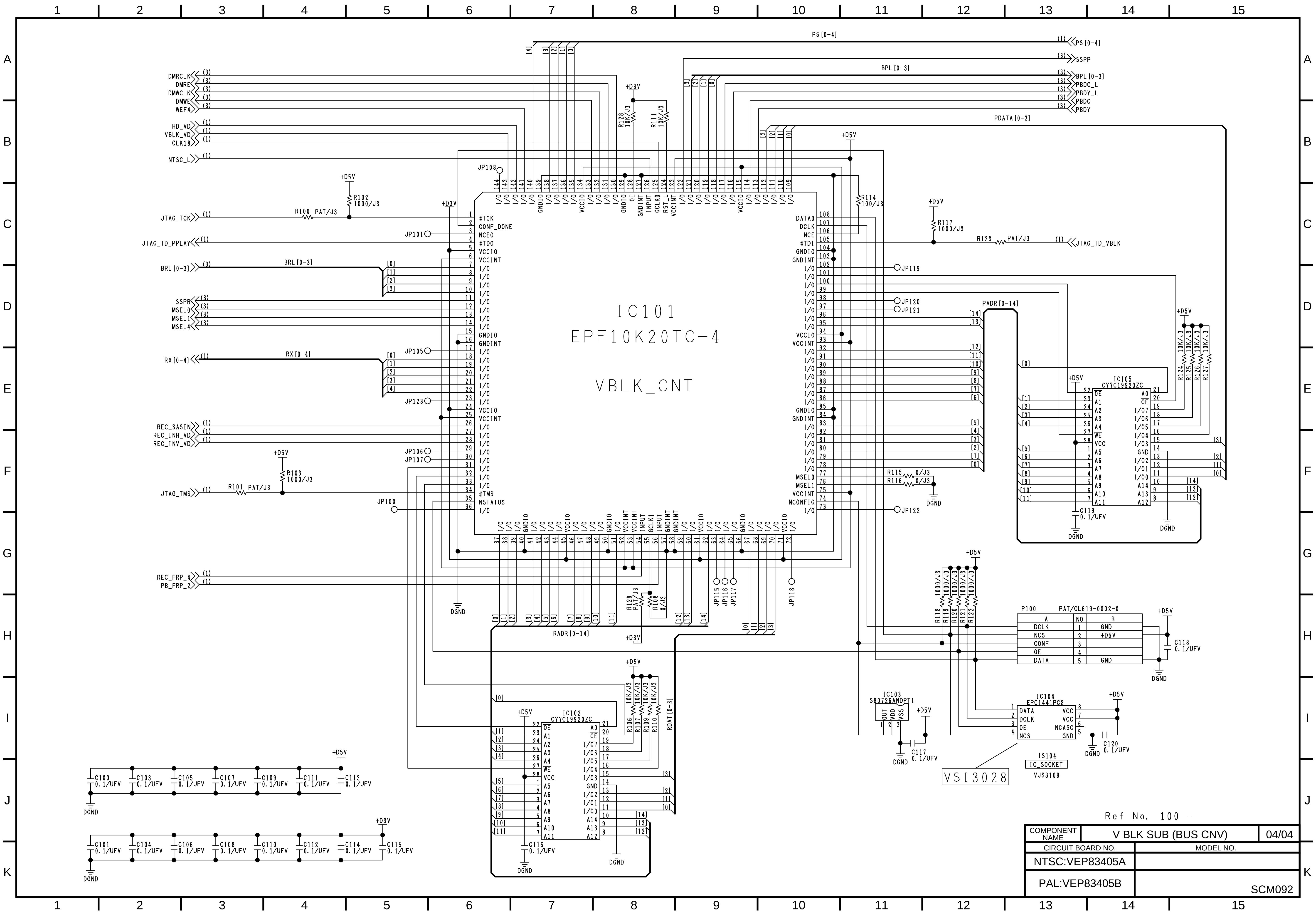
COMPONENT NAME	V BLK SUB (PLL)	02/04
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83405A		
PAL:VEP83405B		SCM090


IC51
T203E3801AF1
VBLK
IC56 T74VHC244FT1
IC50 PAT/T74VHCT244F1
IC52 T74VHC244FT1
IC53 T74VHC244FT1
IC54 TC7S04FTE85L
IC55 TC7S04FTE85L
SI [0-15]
REC_INH_VD
REC_INV_VD
VBLK_BW1
VBLK_BW2
VBLK_CLK
VBLK_SDI
VBLK_CS
LPF_SEL1
TXT_GATE
TXT_SIG
VBLK_SL_CLK
VBLK_SL_DATA
CLK135
VCLK
WIND
AVWR_L
AVDT [0-7]
AVAD [0-6]
RG_SLOW_H
FS_OBUF
FF_OBUF
RG_REV_H
VOUT_CSYNC
VIN_CSYNC
CS_VB_L
AVRD_L
RST_GA_L
CLK18
SSPR
REC_FRP_4
BRL [0-3]
MSEL4
MSEL1
MSEL0
PBDC
PBDY
VBLK_VD
HD_VD
CLK27
PBDC_L
PBDY_L
SO_MIX [0-15]
DMRE
DMRCLK
DMWE
DMWCLK
WEF4
PB_FRP_2
SSPP
BPL [0-3]
TP50 EYF6CU
TP51 EYF6CU
CP50
CP51
OPEN
+D5V
+D3V
DGND
PCD [0-7]
PYD [0-7]

Ref No. 050 - 099,200 -

COMPONENT NAME	V BLK SUB (V BLK)	03/04
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83405A		
PAL:VEP83405B		

SCM091

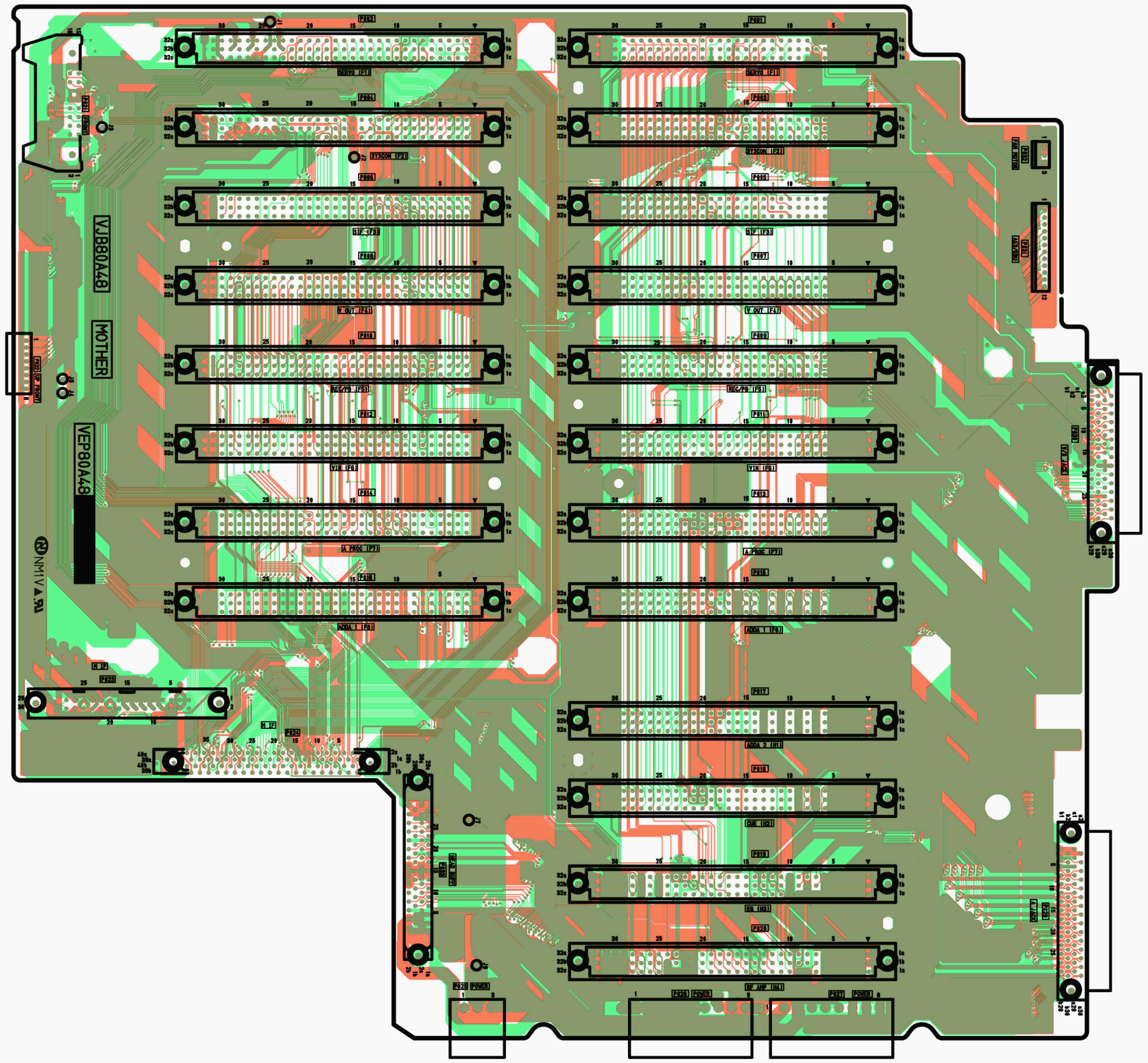

IC101
EPF10K20TC-4
VBLK_CNT
IC102
CY7C19920ZC
IC103
S80726ANDPT1
IC104
EPC1441PC8
IC105
CY7C19920ZC
P100 PAT/CL619-0002-0
IS104
IC_SOCKET
VJS3109
VSI3028
PS[0-4]
SSPP
BPL[0-3]
PBDC_L
PBDY_L
PBDC
PBDY
PDATA[0-3]
DMRCLK
DMRE
DMWCLK
DMWE
WEF4
HD_VD
VBLK_VD
CLK18
NTSC_L
JTAG_TCK
JTAG_TD_PPLAY
BRL[0-3]
SSPR
MSEL0
MSEL1
MSEL4
RX[0-4]
REC_SASEN
REC_INH_VD
REC_INV_VD
JTAG_TMS
REC_FRP_4
PB_FRP_2
JTAG_TD_VBLK
PADR[0-14]
RADR[0-14]
RDAT[0-3]
+D3V
+D5V
DGND
GND
R100 PAT/J3
R101 PAT/J3
R102 1000/J3
R103 1000/J3
R111 10K/J3
R114 100/J3
R115 0/J3
R116 0/J3
R117 1000/J3
R123 PAT/J3
R124 10K/J3
R125 10K/J3
R126 10K/J3
R127 10K/J3
R128 10K/J3
R129 PAT/J3
R108 0/J3
R106 10K/J3
R107 10K/J3
R109 10K/J3
R110 10K/J3
R118 1000/J3
R119 1000/J3
R120 1000/J3
R121 1000/J3
R122 1000/J3
C100 0.1/UFV
C101 0.1/UFV
C103 0.1/UFV
C104 0.1/UFV
C105 0.1/UFV
C106 0.1/UFV
C107 0.1/UFV
C108 0.1/UFV
C109 0.1/UFV
C110 0.1/UFV
C111 0.1/UFV
C112 0.1/UFV
C113 0.1/UFV
C114 0.1/UFV
C115 0.1/UFV
C116 0.1/UFV
C117 0.1/UFV
C118 0.1/UFV
C119 0.1/UFV
C120 0.1/UFV
JP100
JP101
JP105
JP106
JP107
JP108
JP115
JP116
JP117
JP118
JP119
JP120
JP121
JP122
JP123
DATA0
DCLK
NCE
#TDI
#TCK
CONF_DONE
NCE0
#TDO
#TMS
NSTATUS
MSEL0
MSEL1
NCONFIG
DATA
DCLK
NCS
CONF
OE
NCASC
VCC
A
NO
B

Ref No. 100 -

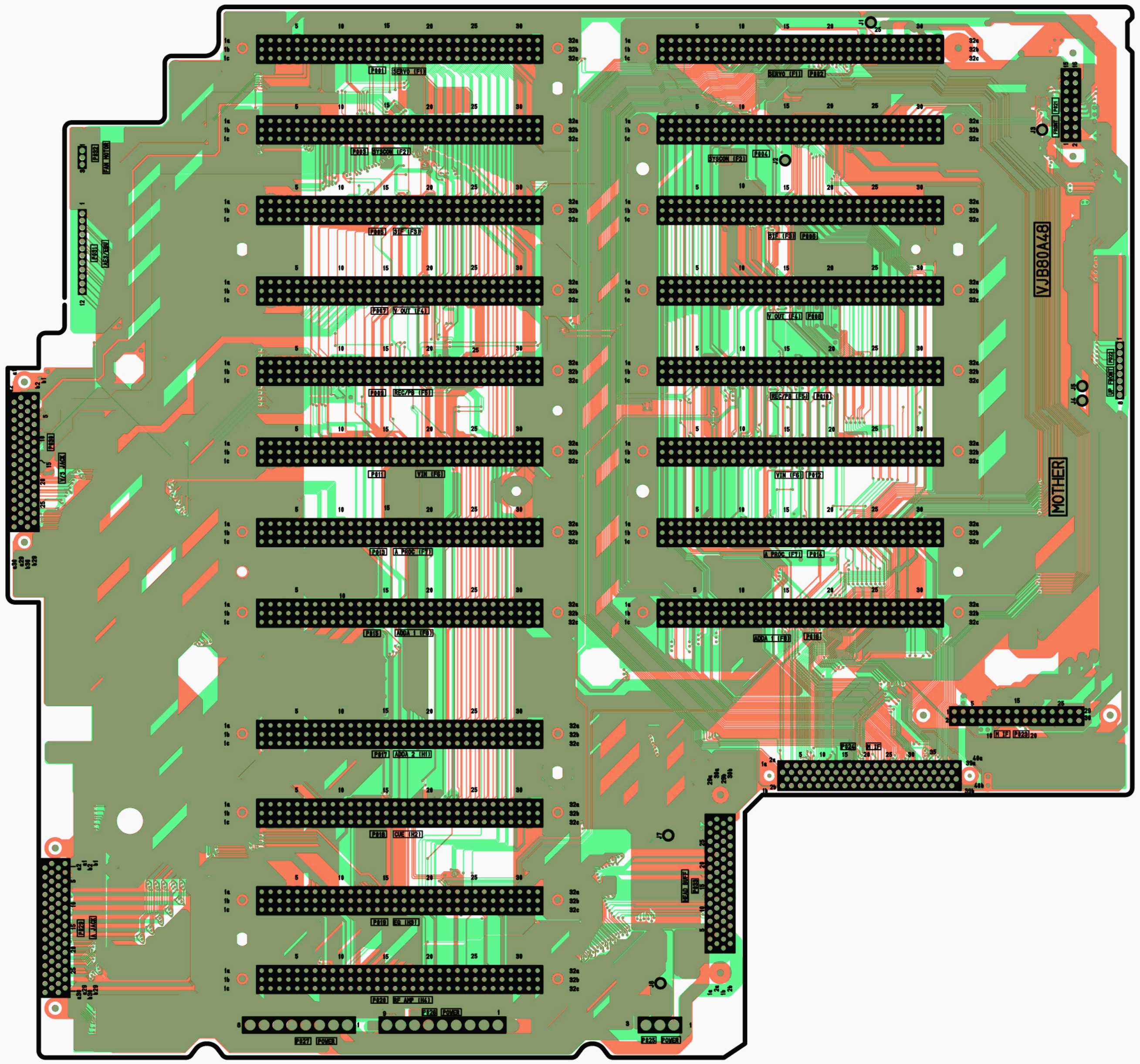
COMPONENT NAME	V BLK SUB (BUS CNV)	04/04
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83405A		
PAL:VEP83405B		

SCM092

MOTHER P.C.BOARD (VEP80A48A)



(COMPONENT SIDE)



(FOIL SIDE)

CBA-22

CBA-22

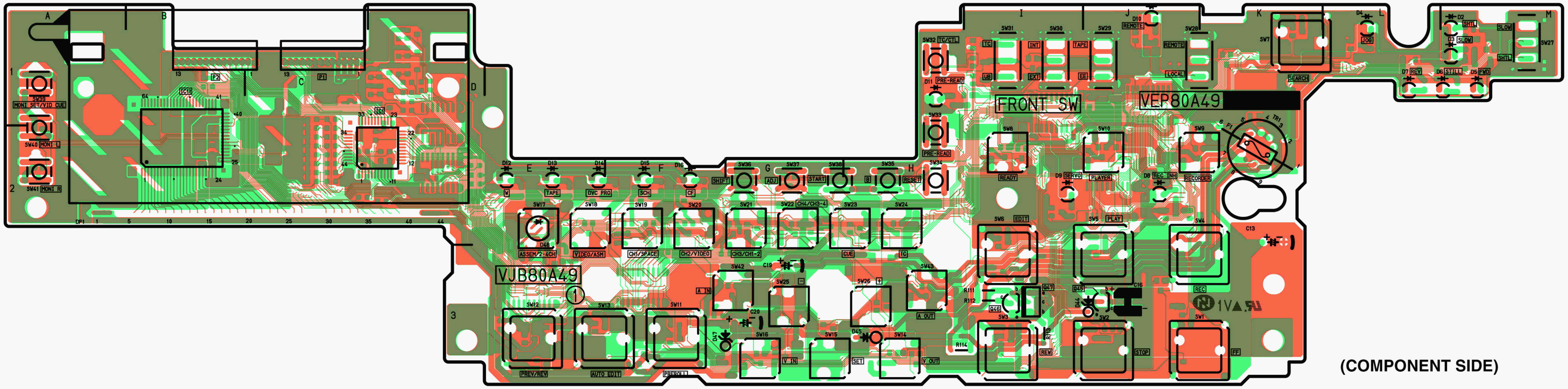
FRONSW P.C.BOARD (VEP80A49B)

COMPONENT SIDE

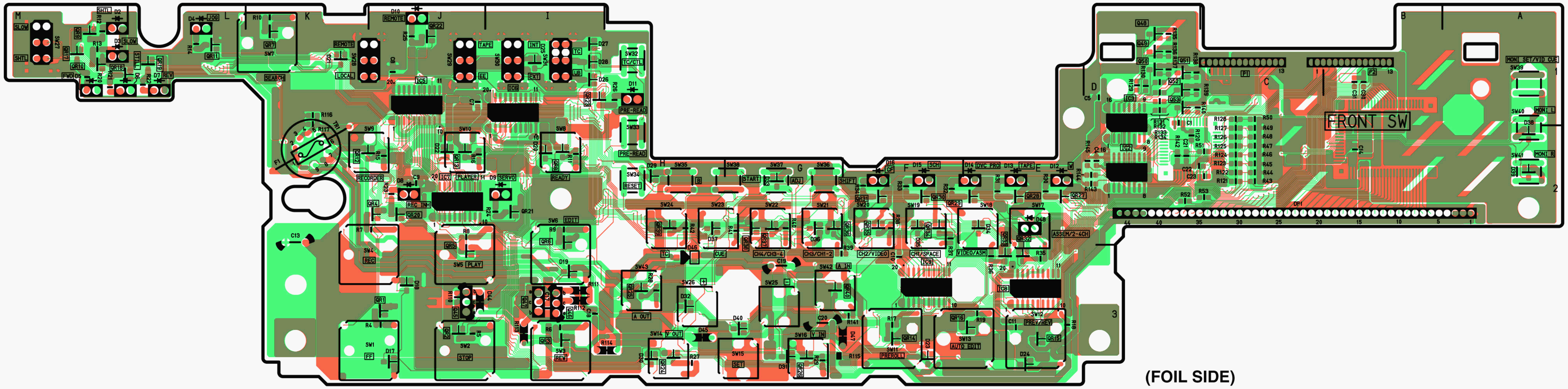
REF	LOC	REF	LOC	REF	LOC
IC1	D2	SW12	E3	SW30	I1
IC11	B2	SW13	F3	SW31	I1
P1	C1	SW14	H3	SW32	H1
P2	C1	SW15	G3	SW33	H2
Q45	J3	SW16	G3	SW34	H2
Q46	I3	SW17	E2	SW35	H2
Q47	I3	SW18	E2	SW36	G2
SW1	J3	SW19	F2	SW37	G2
SW2	J3	SW20	F2	SW38	G2
SW3	I3	SW21	G2	SW39	A1
SW4	J3	SW22	G2	SW40	A1
SW5	J3	SW23	H2	SW41	A2
SW6	I3	SW24	H2	SW42	G3
SW7	K1	SW25	G3	SW43	H3
SW8	I2	SW26	H3		
SW9	J2	SW27	M1		
SW10	J2	SW28	J1		
SW11	F3	SW29	J1		

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC
IC2	D2	QR6	I2	QR24	H3
IC3	D1	QR7	K1	QR25	H3
IC5	J1	QR8	I2	QR26	G3
IC6	I1	QR9	M1	QR27	E2
IC7	J2	QR10	M1	QR28	E2
IC8	E3	QR11	L1	QR29	E2
IC9	F3	QR12	J2	QR30	F2
Q48	D1	QR13	J2	QR31	F2
Q49	D1	QR14	F3	QR32	E3
Q50	D1	QR15	E3	QR33	E3
Q51	D1	QR16	E3	QR34	F2
Q52	D1	QR17	M1	QR35	F2
Q53	D1	QR18	M1	QR36	G2
QR1	J3	QR19	L1	QR37	G2
QR2	J3	QR20	J2	QR38	G2
QR3	I3	QR21	I2	QR39	H2
QR4	J2	QR22	J1	QR40	G3
QR5	J3	QR23	I1		


A
B
C
D
E
F
G
H
I
J
K
L
M
1
2
3
FRONT SW
VEP80A49
VJB80A49
MONI SET/VID CUE
REMOTE
SEARCH
SHTL
SLOW
JOG
PRE-READ
TC/CTL
INT
EXT
TAPE
LOCAL
SHIFT
ADJ
START
RESET
READY
SERVO
PLAYER
REC INH
RECORDER
EDIT
PLAY
ASSEM/2-4CH
VIDEO/ASM
CH1/SPACE
CH2/VIDEO
CH3/CH1-2
CH4/CH3-4
CUE
TC
DVC PRO
SCH
CF
A IN
A OUT
V IN
V OUT
SET
PREROLL
AUTO EDIT
PREV/REV
STOP
REW
FF
REC
1VA

(COMPONENT SIDE)


M
L
K
J
I
H
G
F
E
D
C
B
A
1
2
3
FRONT SW
SLOW
SHTL
JOG
REMOTE
SEARCH
LOCAL
TAPE
INT
EXT
TC/CTL
PRE-READ
MONI SET/VID CUE
RECORDER
PLAYER
SERVO
READY
EDIT
PLAY
STOP
FF
ASSEM/2-4CH
VIDEO/ASM
CH1/SPACE
CH2/VIDEO
CH3/CH1-2
CH4/CH3-4
PREROLL
AUTO EDIT
PREV/REV

(FOIL SIDE)

CBA-25

CBA-25

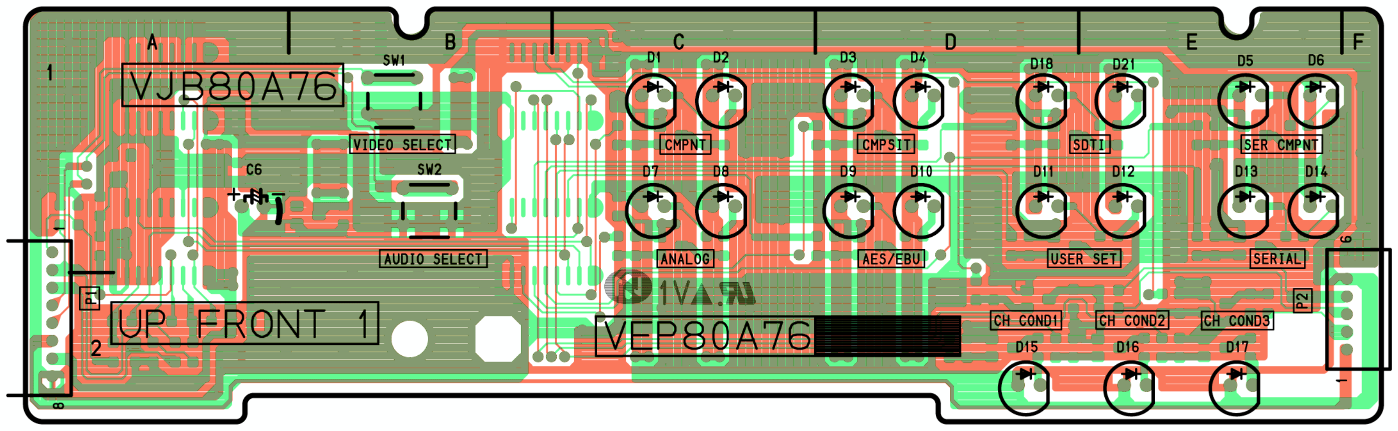
UP FRONT 1 P.C.BOARD (VEP80A76A)

COMPONENT SIDE

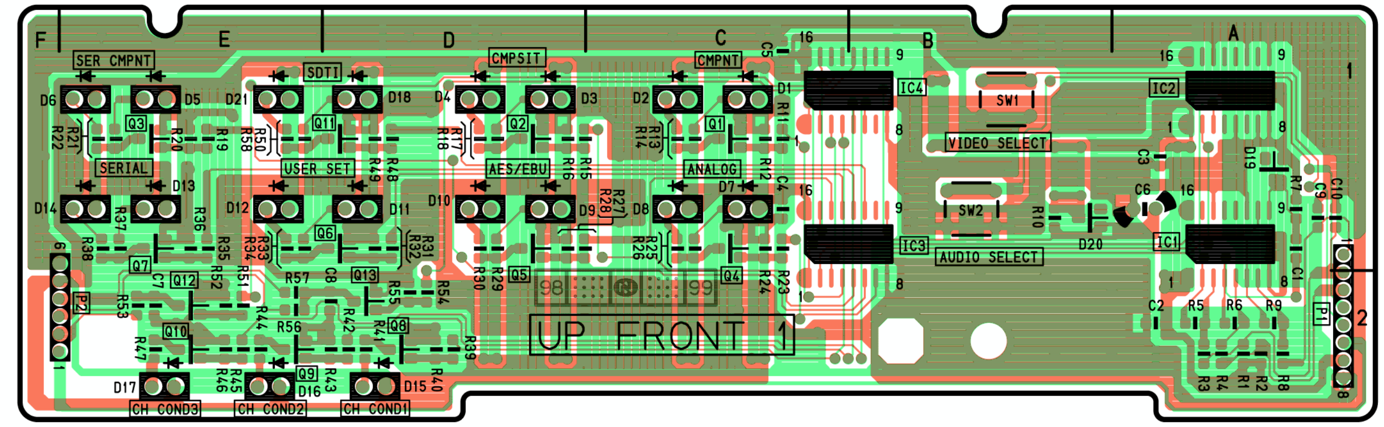
REF	LOC
P1	A1
P2	E2
SW1	B1
SW2	B1

FOIL SIDE

REF	LOC	REF	LOC
IC1	A1	Q6	D1
IC2	A1	Q7	E1
IC3	B1	Q8	D2
IC4	B1	Q9	E2
Q1	C1	Q10	E2
Q2	D1	Q11	D1
Q3	E1	Q12	E2
Q4	C1	Q13	D2
Q5	D1		

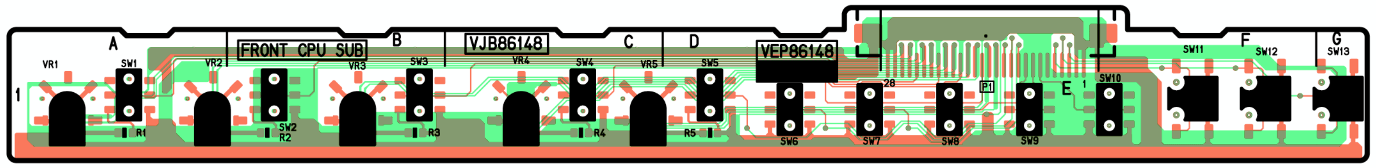

VJB80A76
VIDEO SELECT
AUDIO SELECT
CMPNT
CMPSIT
SDTI
SER CMPNT
ANALOG
AES/EBU
USER SET
SERIAL
CH COND1
CH COND2
CH COND3
UP FRONT 1
VEP80A76
P1
P2
SW1
SW2
C6

(COMPONENT SIDE)


SER CMPNT
SDTI
CMPSIT
CMPNT
SERIAL
USER SET
AES/EBU
ANALOG
VIDEO SELECT
AUDIO SELECT
CH COND3
CH COND2
CH COND1
UP FRONT 1
IC1
IC2
IC3
IC4
SW1
SW2
P1
P2

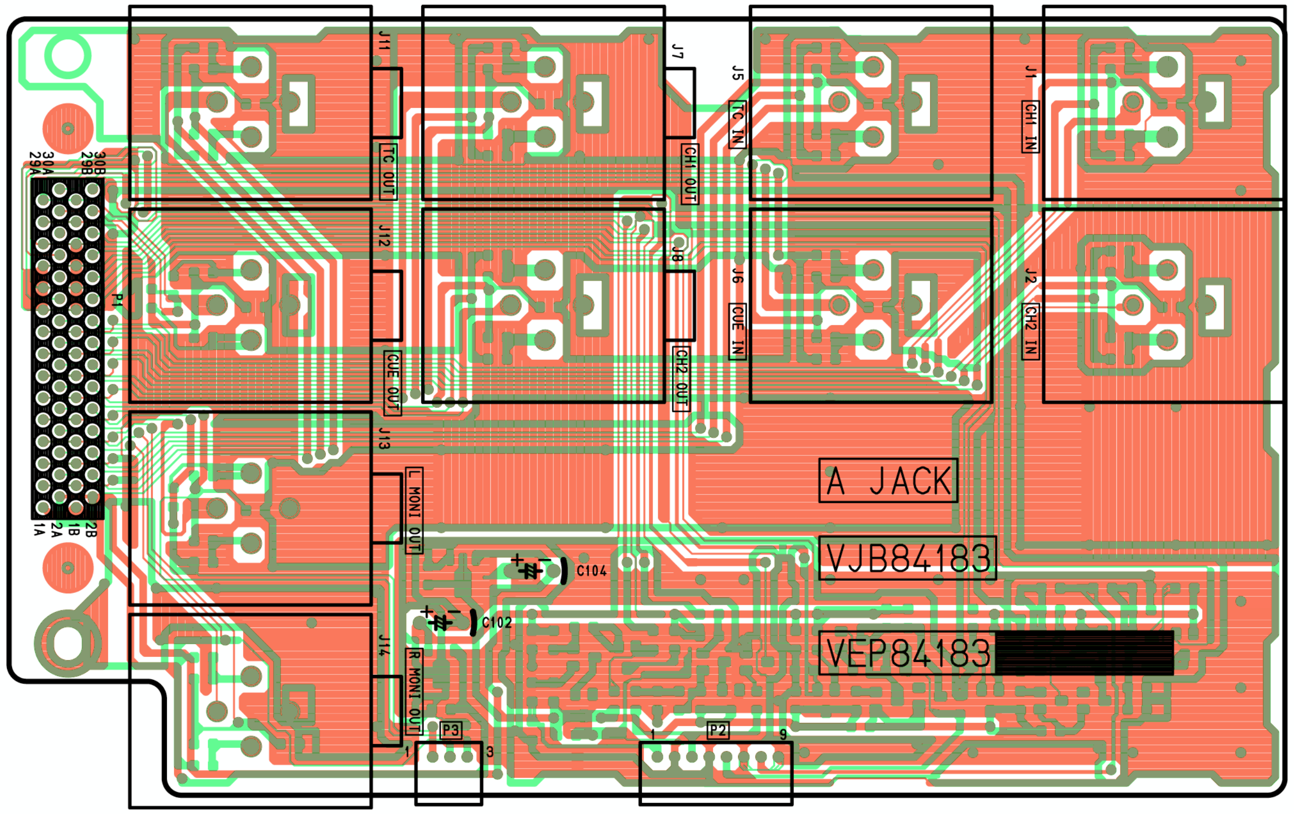
(FOIL SIDE)

FRONT CPU SUB P.C.BOARD (VEP86148A)

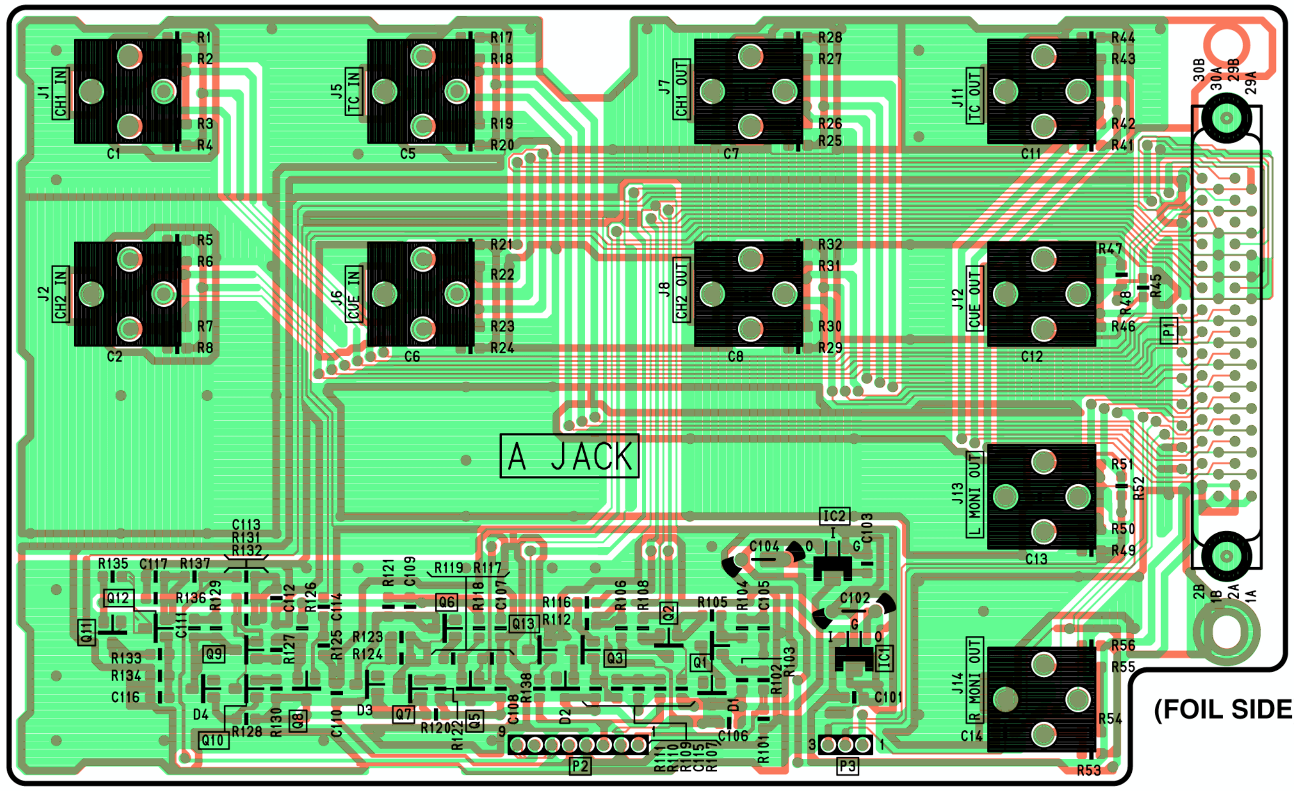

FRONT CPU SUB
VJB86148
VEP86148
P1

(COMPONENT SIDE)

A JACK P.C.BOARD (VEP84183A,VEP84183B)

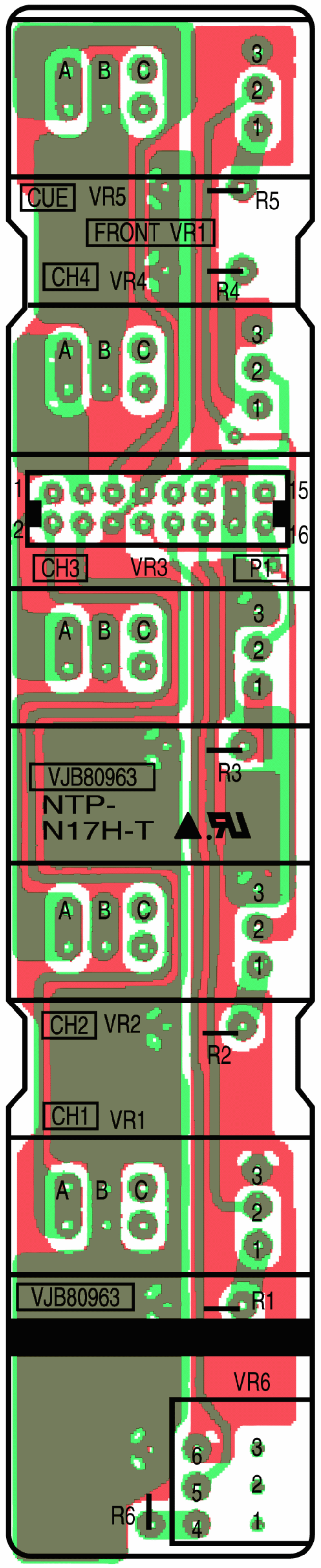

J11
TC OUT
J7
CH1 OUT
J5
TC IN
J1
CH1 IN
J12
CUE OUT
J8
CH2 OUT
J6
CUE IN
J2
CH2 IN
J13
L MONI OUT
J14
R MONI OUT
A JACK
VJB84183
VEP84183
C104
C102
P1
P2
P3

(COMPONENT SIDE)

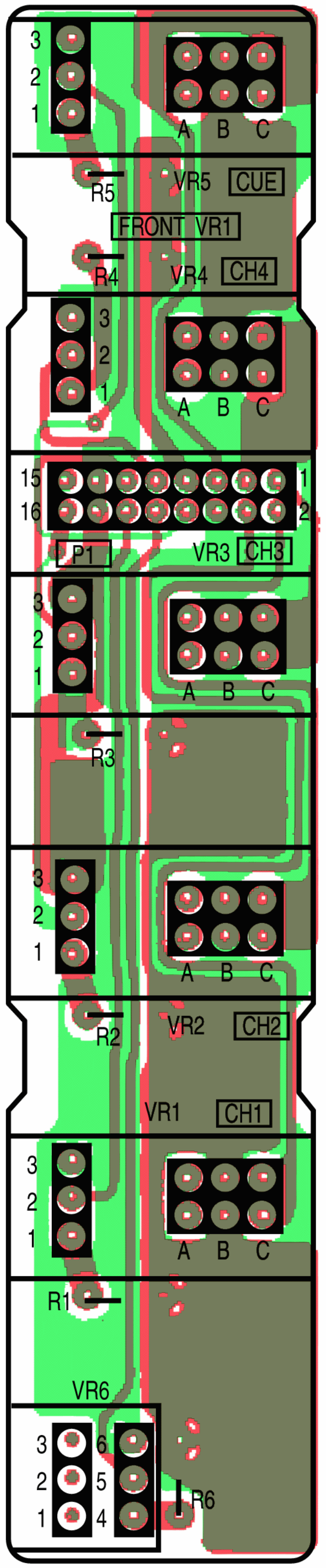

J1
CH1 IN
J5
TC IN
J7
CH1 OUT
J11
TC OUT
J2
CH2 IN
J6
CUE IN
J8
CH2 OUT
J12
CUE OUT
J13
L MONI OUT
J14
R MONI OUT
A JACK
IC1
IC2
P1
P2
P3

(FOIL SIDE)

FRONT VR1 P.C. BOARD (VEP80963C)

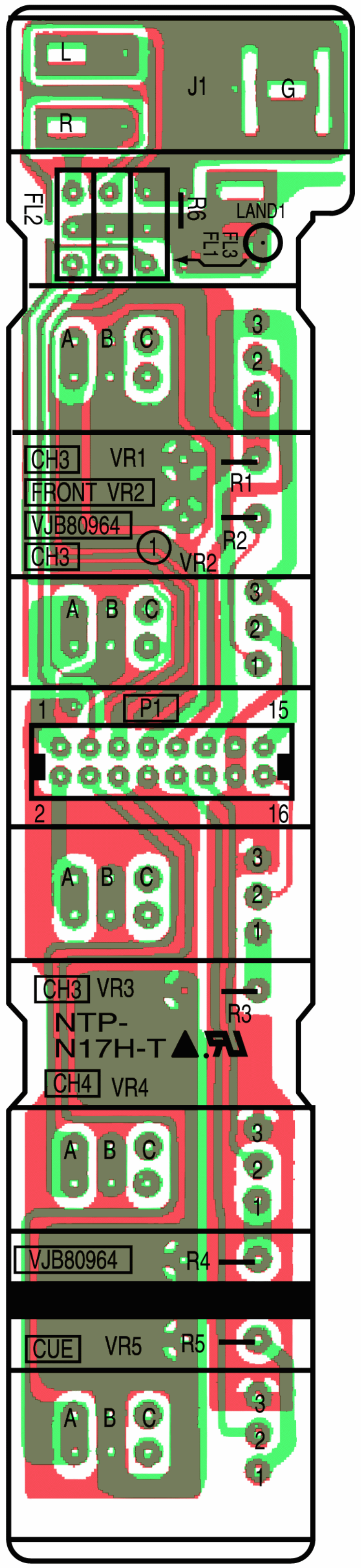

A B C
3 2 1
CUE VR5
R5
FRONT VR1
CH4 VR4
R4
1 2 15 16
CH3 VR3 P1
VJB80963
NTP-
N17H-T
R3
CH2 VR2
R2
CH1 VR1
R1
VR6
6 5 4
3 2 1
R6

(COMPONENT SIDE)

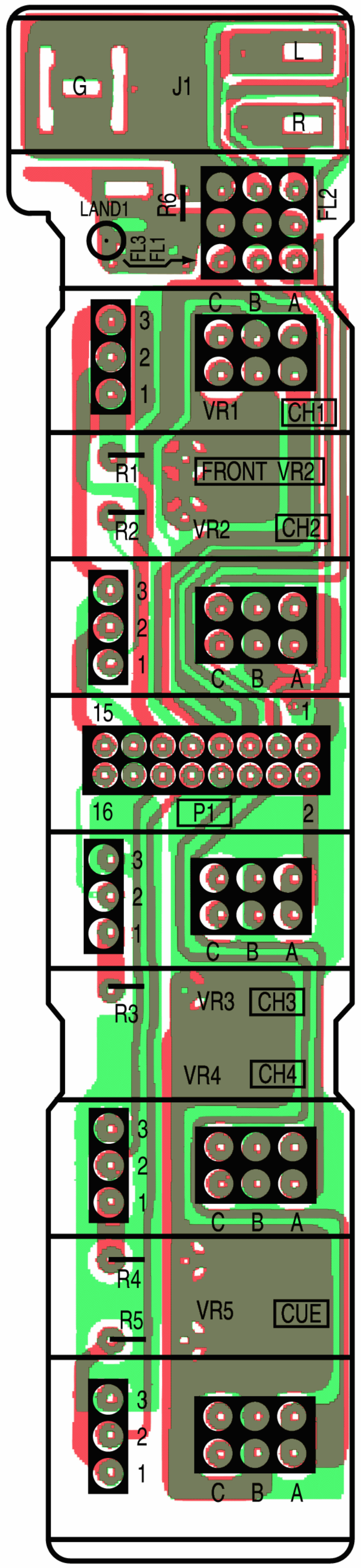

3 2 1
A B C
R5 VR5 CUE
FRONT VR1
R4 VR4 CH4
15 16 1 2
P1 VR3 CH3
R3
R2 VR2 CH2
VR1 CH1
R1
VR6
3 2 1
6 5 4
R6

(FOIL SIDE)

FRONT VR2 P.C. BOARD (VEP80964C)

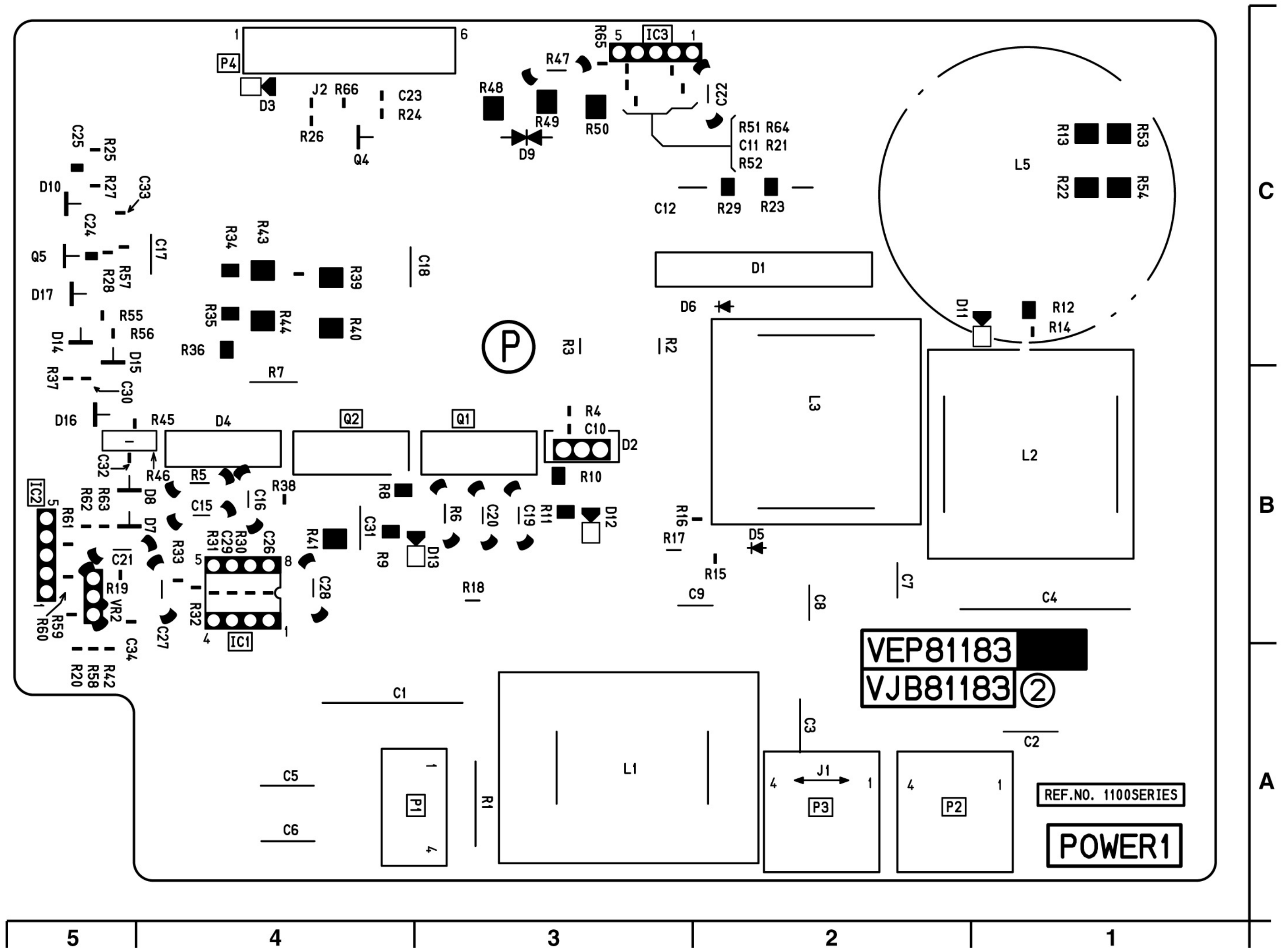

L
R
J1
G
FL2
R6
LAND1
FL3
FL1
A B C
3 2 1
CH3 VR1
FRONT VR2
VJB80964
CH3
R1
R2
VR2
1 P1 15
2 16
CH3 VR3
NTP-
N17H-T
R3
CH4 VR4
VJB80964
R4
CUE VR5
R5

(COMPONENT SIDE)


G
J1
L
R
LAND1
R6
FL2
FL3
FL1
C B A
3 2 1
VR1 CH1
R1
FRONT VR2
R2 VR2 CH2
15 1
16 P1 2
R3 VR3 CH3
VR4 CH4
R4
R5 VR5 CUE

(FOIL SIDE)

POWER 1 P.C. BOARD (VEP81183A)



VEP81183
VJB81183 ②
REF.NO. 1100SERIES
POWER1
P
C
B
A
5
4
3
2
1

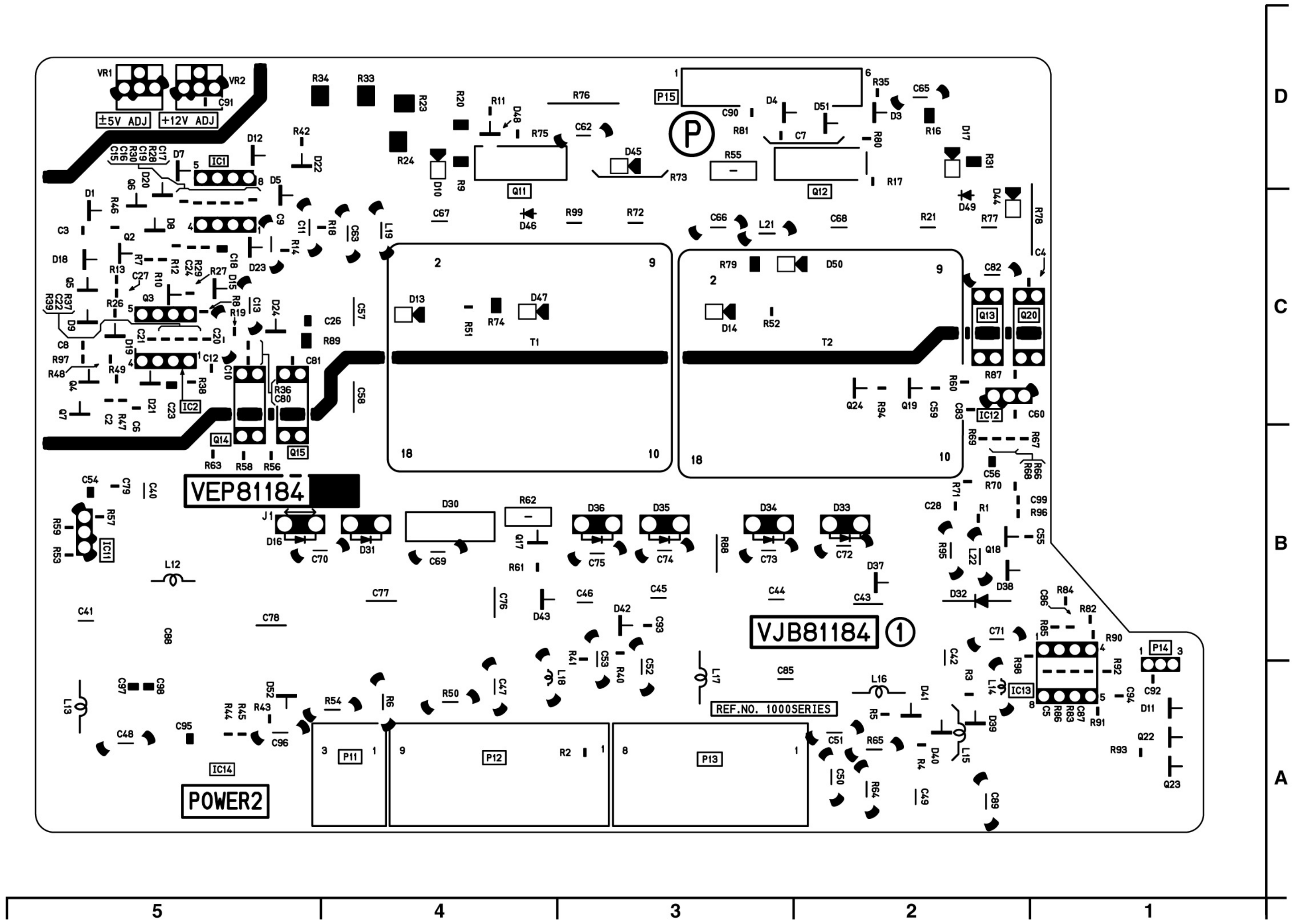
(COMPONENT SIDE)

POWER 2 P.C. BOARD (VEP81184B)

▭ 内は充電部です。AC100Vが加わっておりますので点検、修理のときは
感電しないよう十分ご注意ください。

CAUTION

THE ▭ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.



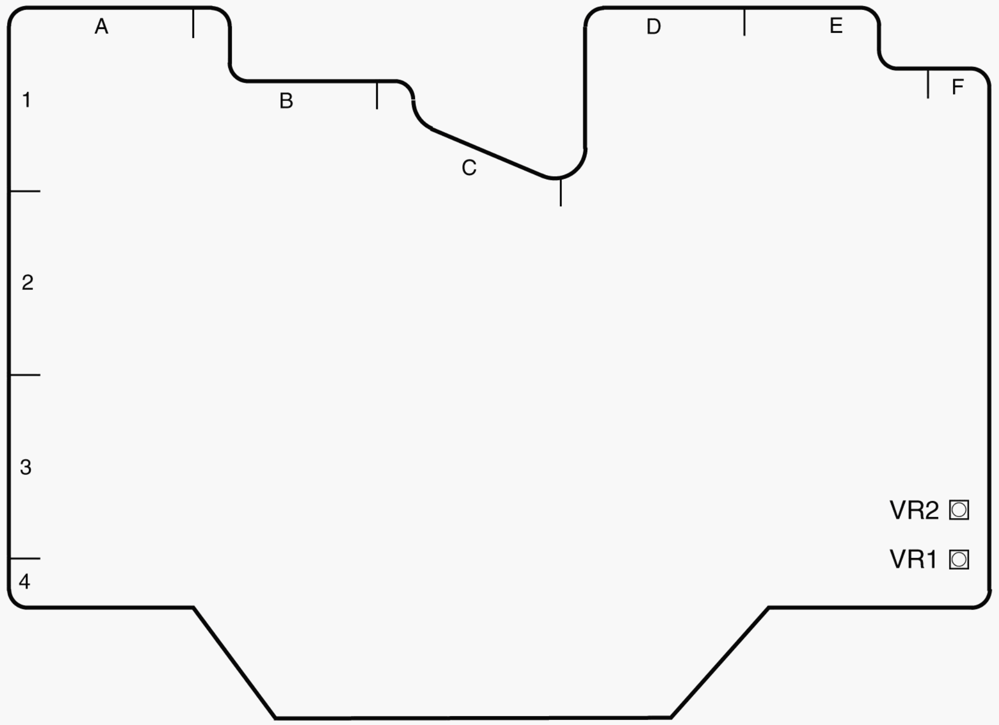
VEP81184
VJB81184 ①
REF.NO. 1000SERIES
POWER2
±5V ADJ
+12V ADJ
P
T1
T2
D
C
B
A
5
4
3
2
1

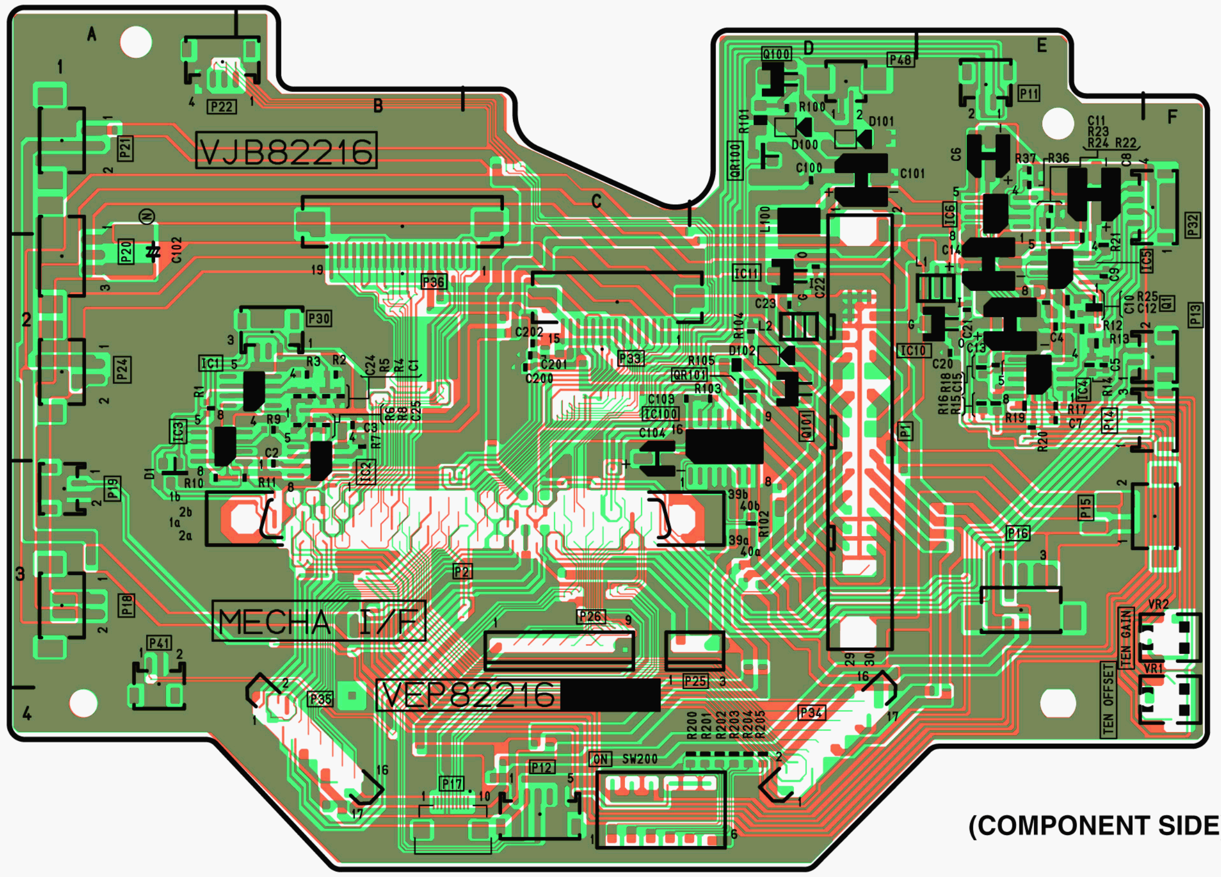
(FOIL SIDE)

MECHA IF P.C.BOARD (VEP82216A)

COMPONENT SIDE

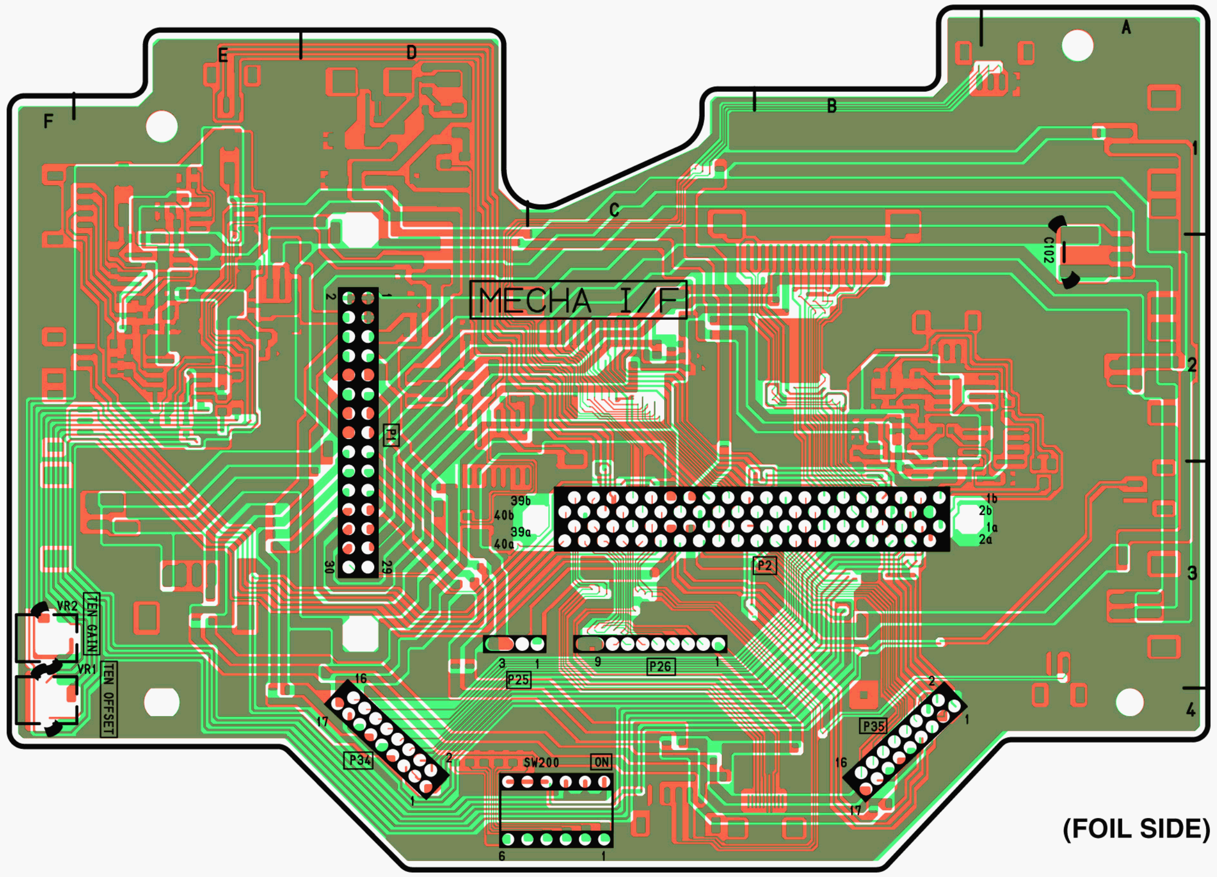
REF	LOC	REF	LOC
IC1	B2	P33	C2
IC2	B3	P36	B1
IC3	A2	P41	A3
IC4	E2	P48	D1
IC5	E2	Q1	E2
IC6	E1	Q100	D1
IC10	E2	Q101	D2
IC11	D2	QR100	D1
IC100	D2	QR101	D2
P1	D2	SW200	C4
P2	C3	VR1	F4
P11	E1	VR2	F3
P12	C4		
P13	F2		
P14	F2		
P15	F3		
P16	E3		
P17	B4		
P18	A3		
P19	A3		
P20	A2		
P21	A1		
P22	A1		
P24	A2		
P25	C3		
P26	C3		
P30	B2		
P32	F1		


A
B
C
D
E
F
1
2
3
4
VR2
VR1


VJB82216
MECHA I/F
VEP82216
SW200
VR2
VR1
TEN GAIN
TEN OFFSET

(COMPONENT SIDE)

CBA-24


MECHA I/F
SW200
VR2
VR1
TEN GAIN
TEN OFFSET

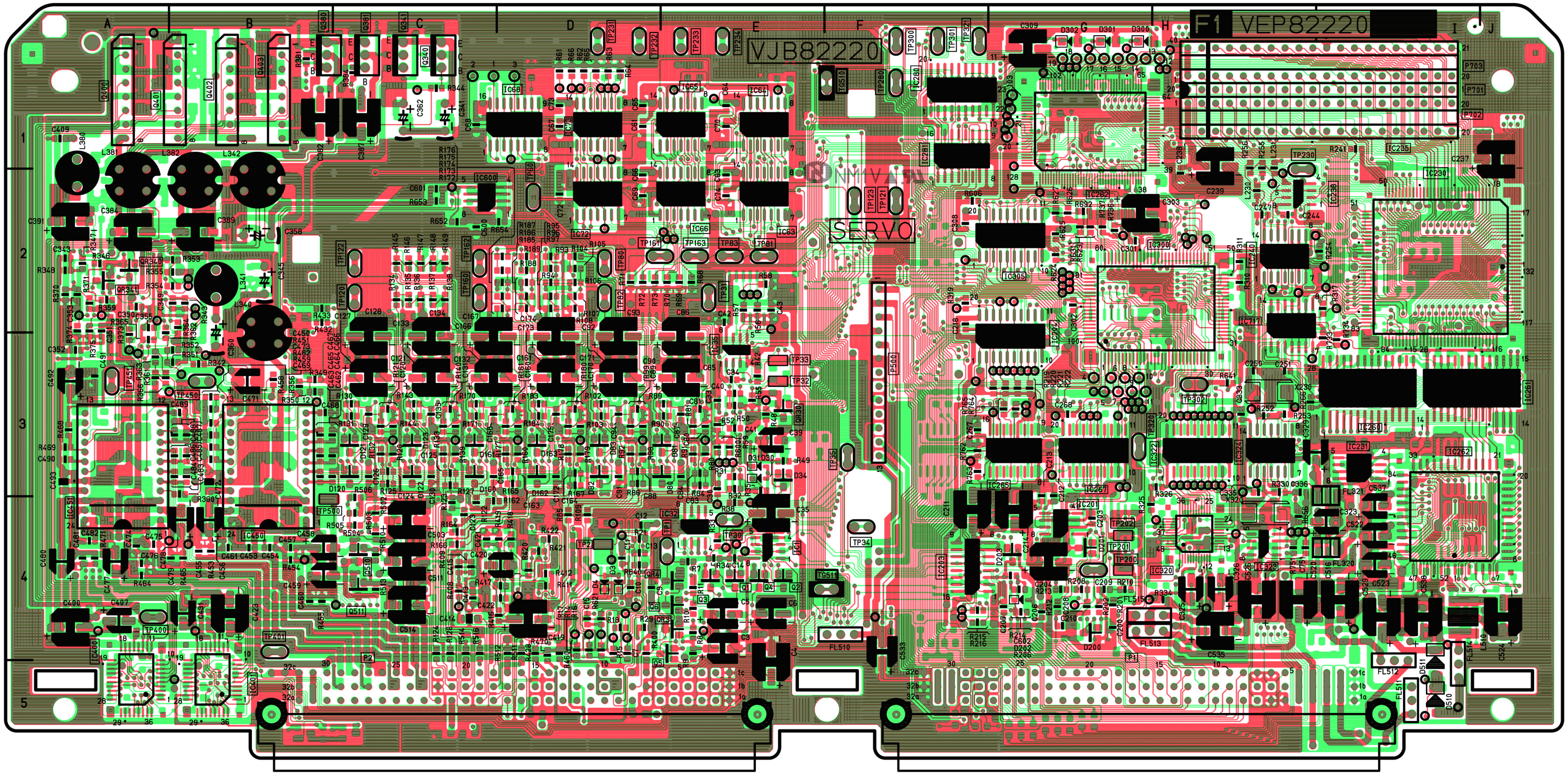
(FOIL SIDE)

CBA-24

SERVO P.C.BOARD (NTSC:VEP82220A,PAL:VEP82220B)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	E4	IC305	G2	Q400	A1	TP121	F2
IC32	E4	IC320	H4	Q401	B1	TP122	C2
IC35	E3	IC322	H3	Q402	B1	TP123	F2
IC63	E2	IC323	H4	Q403	B1	TP160	C2
IC64	E1	IC324	H3	Q510	C4	TP161	D2
IC65	E1	IC400	A5	Q511	C4	TP162	C2
IC66	E2	IC401	B5	QR3	E4	TP163	E2
IC68	D1	IC450	B4	QR4	E4	TP200	G4
IC72	D2	IC451	A4	QR30	E3	TP201	G4
IC73	D1	IC600	C2	QR340	A2	TP202	G4
IC201	G4	IC717	H2	QR341	A2	TP230	H2
IC203	F4	P1	G5	TG510	F1	TP231	D1
IC204	G3	P2	D5	TG511	F4	TP232	D1
IC230	I2	P500	F2	TP1	E4	TP233	E1
IC231	I3	P701	I1	TP2	D4	TP234	E1
IC235	H1	P702	H1	TP30	E4	TP280	F1
IC238	H2	P703	H1	TP31	E2	TP300	F1
IC240	H2	Q1	E4	TP32	E3	TP301	F1
IC260	I3	Q2	E4	TP33	E3	TP302	H3
IC261	I3	Q3	E4	TP34	F4	TP320	G3
IC262	I4	Q4	E4	TP35	F3	TP321	F1
IC265	G3	Q5	E4	TP60	D2	TP400	A4
IC267	G3	Q6	E4	TP80	D2	TP401	B4
IC280	F1	Q340	C1	TP81	E2	TP450	B3
IC281	F1	Q341	C1	TP82	D2	TP451	A3
IC282	G1	Q380	B1	TP83	E2	TP500	B4
IC300	H2	Q381	C1	TP120	C2		



(COMPONENT SIDE)

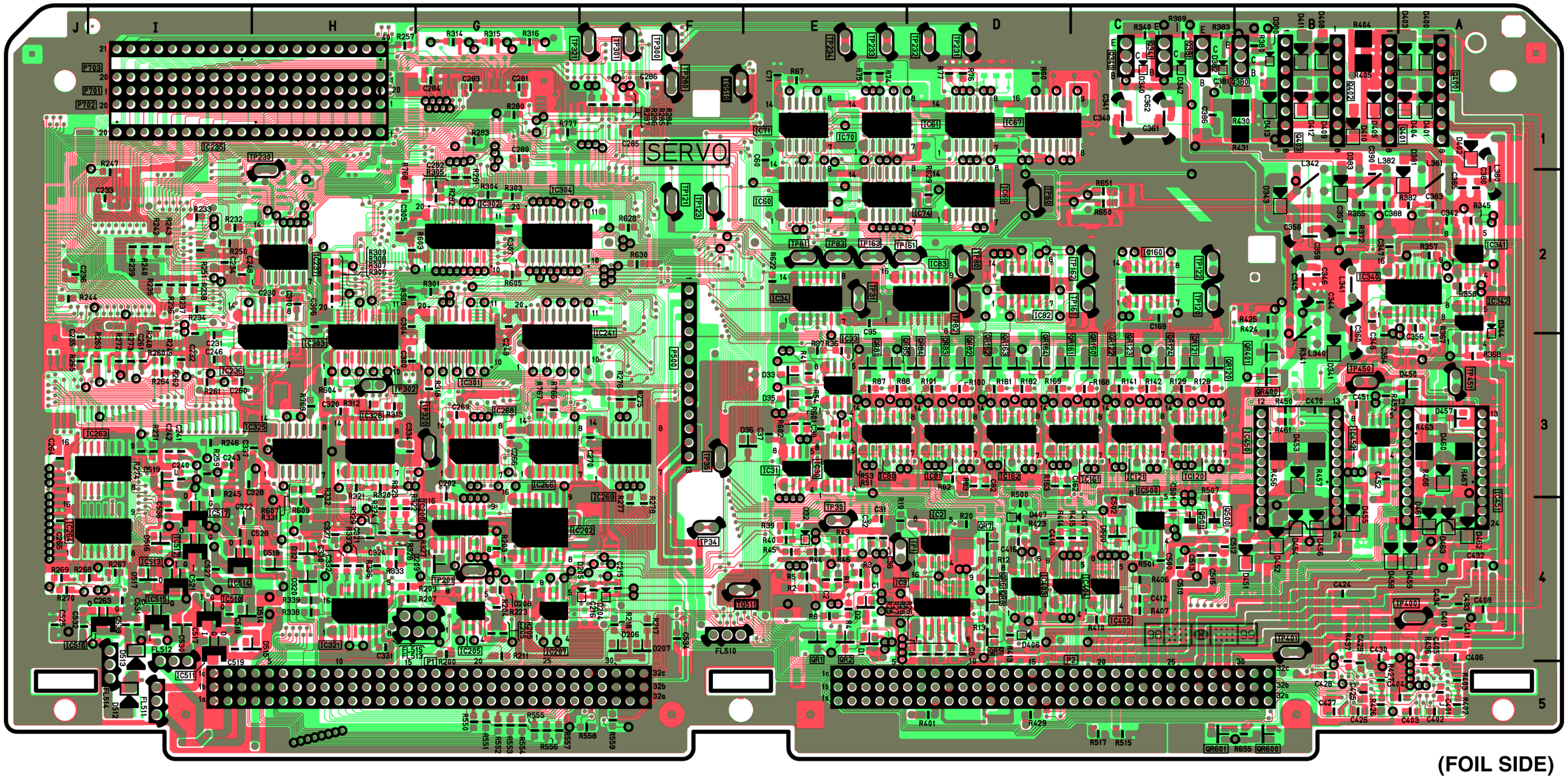
CBA-2

CBA-2

SERVO P.C.BOARD(NTSC:VEP82220A,PAL:VEP82220B)

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC2	D4	IC237	H2	IC515	I4	QR401	B3
IC3	D4	IC241	G3	IC516	I4	QR600	B5
IC30	E3	IC263	I3	IC517	I4	QR601	C5
IC31	E3	IC264	I4	Q500	C4		
IC33	E3	IC266	G3	Q501	C4		
IC34	E2	IC268	G3	QR1	E4		
IC60	E2	IC269	F3	QR2	E4		
IC61	D1	IC301	G3	QR5	D4		
IC67	D1	IC302	G2	QR6	D4		
IC69	D2	IC303	H3	QR7	D4		
IC70	E1	IC304	G2	QR8	D4		
IC71	E1	IC321	H4	QR81	E3		
IC74	E2	IC325	H3	QR82	D3		
IC80	E3	IC326	H3	QR83	D3		
IC81	D3	IC340	A2	QR84	D3		
IC82	D2	IC341	A2	QR85	E3		
IC83	D2	IC342	A2	QR120	C3		
IC120	C3	IC402	C4	QR121	C3		
IC121	C3	IC403	D4	QR122	C3		
IC160	C2	IC404	D4	QR123	C3		
IC161	C3	IC452	B3	QR124	C3		
IC162	D3	IC500	C4	QR160	C3		
IC200	G4	IC510	I4	QR161	D3		
IC202	G4	IC511	I4	QR162	D3		
IC205	G4	IC512	I4	QR163	D3		
IC207	G4	IC513	I4	QR164	D3		
IC236	H3	IC514	I4	QR400	B3		



(FOIL SIDE)

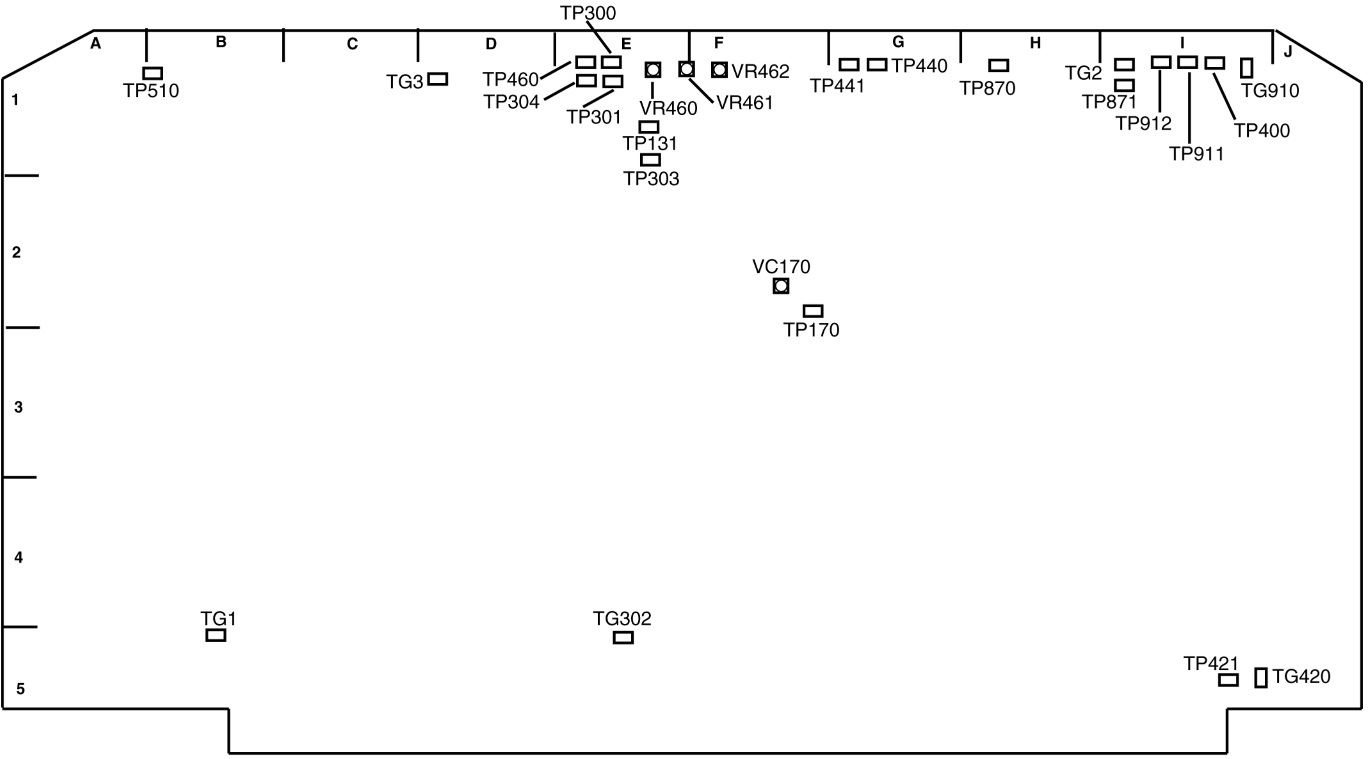
CBA-3

CBA-3

REC PB P.C.BOARD (NTSC:VEP83394A,PAL:83394B)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC
IC75	F1	IC511	A1	TG2	G1
IC105	G4	IC512	B2	TG3	D1
IC108	G3	IC640	B5	TG171	F3
IC109	G3	IC641	B3	TG462	A1
IC110	H4	IC642	B4	TG910	I1
IC111	G4	IC645	B3	TP130	E1
IC131	F2	IC671	B2	TP131	E1
IC172	F1	IC780	H3	TP170	F4
IC177	E3	IC805	I3	TP300	E3
IC181	F3	IC840	C3	TP301	E3
IC182	F2	IC870	I2	TP303	E1
IC188	F2	IC910	I1	TP304	A1
IC300	C4	IC980	H4	TP400	J3
IC302	C4	IC981	H4	TP421	I5
IC303	D4	IC982	H4	TP440	G1
IC330	D4	IC984	H4	TP441	G1
IC331	C4	IC985	H4	TP460	D1
IC334	D3	IC1023	I3	TP510	B1
IC335	E2	IC1111	I3	TP870	J2
IC380	H2	P1	G5	TP871	I1
IC382	H1	P2	D5	TP911	I1
IC400	H3	P60	F1	TP912	I1
IC420	I4	P1050	C1	VC170	F3
IC441	G2	P1060	A3	VR460	E1
IC443	G1	P1110	I4	VR461	E1
IC461	C2	SW100	H1	VR462	E1
IC462	D2	SW330	G1		
IC463	D1	SW331	H1		
IC466	D2	SW1110	H1		
IC510	B2	TG1	I5		



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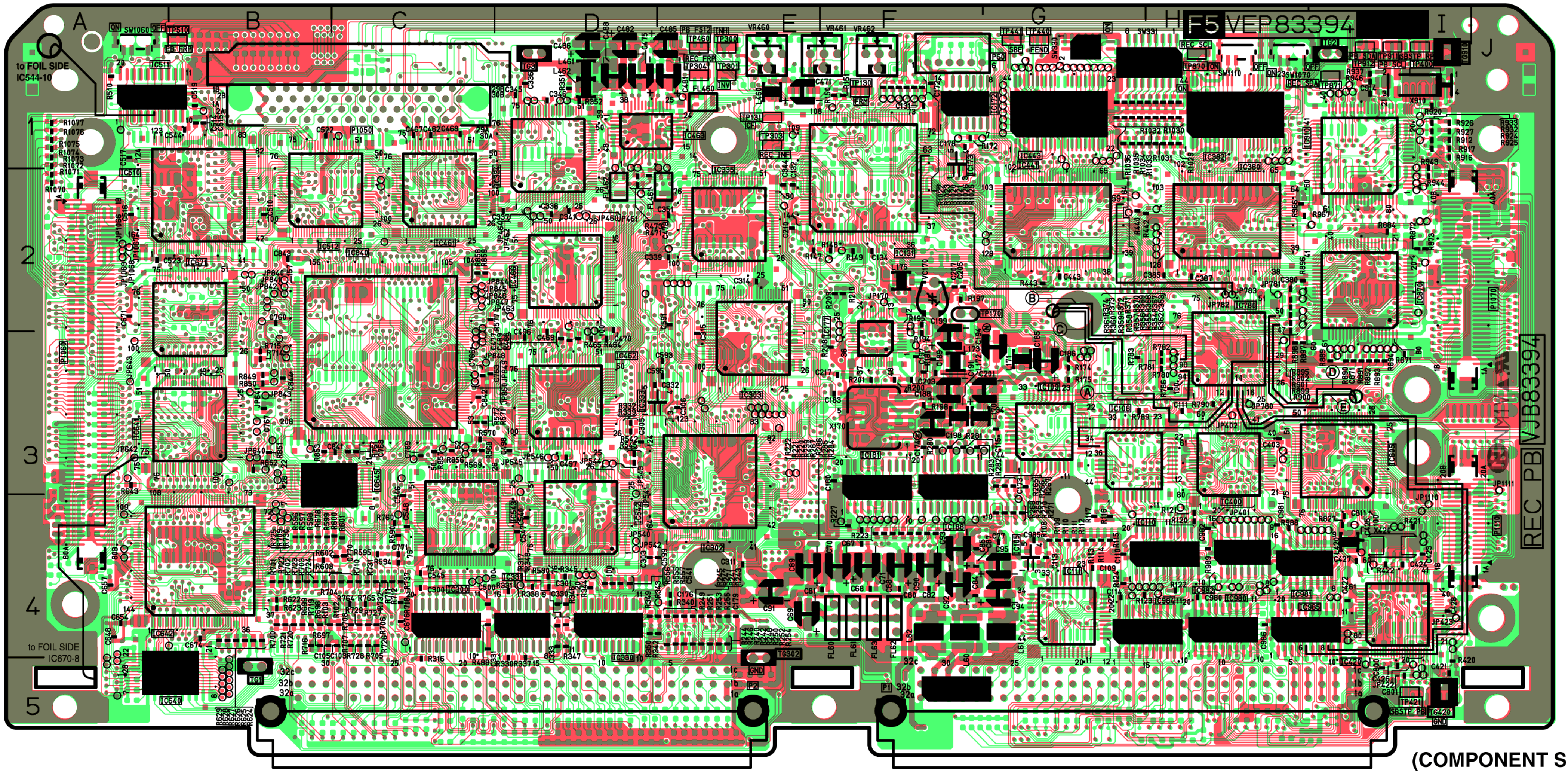
TP421
TG420



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F5 VEP83394
REC PB VJB83394
to FOIL SIDE IC544-10
to FOIL SIDE IC670-8
SW1060
TP510
IC511

(COMPONENT SIDE)

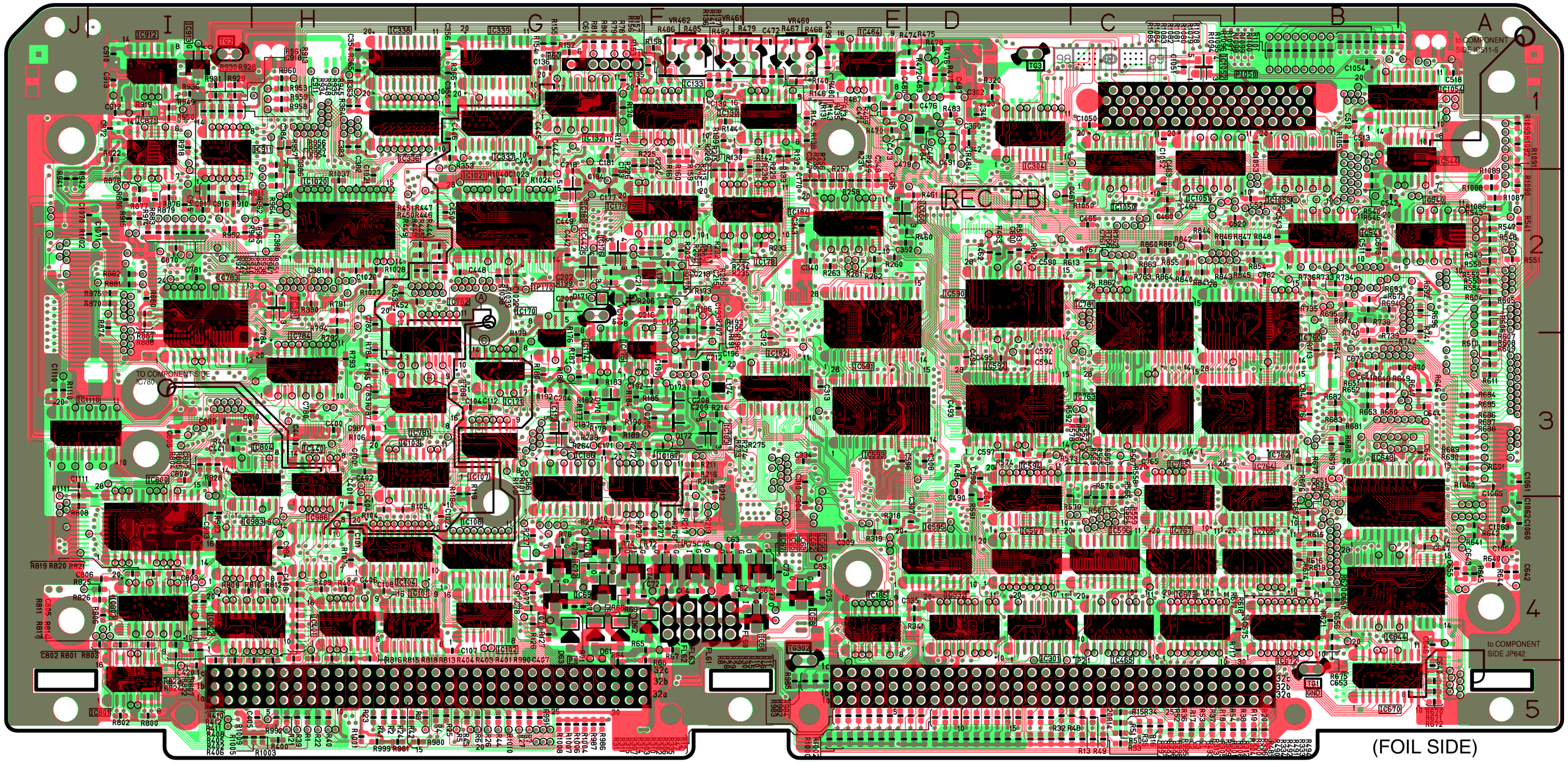
REC P.C.BOARD (NTSC:83394A,PAL:83394B)

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC61	E4	IC175	F3	IC643	B4	IC1051	C1
IC62	F4	IC176	F3	IC644	B4	IC1052	C1
IC63	F4	IC178	E2	IC670	B5	IC1053	B1
IC65	F4	IC183	F2	IC760	B2	IC1054	A1
IC66	E4	IC184	E2	IC761	C2	IC1110	J3
IC67	F4	IC185	D4	IC762	B3	Q170	E3
IC68	E4	IC186	F2	IC763	C3		
IC69	F4	IC187	F3	IC764	B4		
IC70	F4	IC189	E3	IC765	C4		
IC71	G4	IC190	E2	IC766	B4		
IC72	G4	IC301	C4	IC767	C4		
IC73	E4	IC304	D1	IC781	G3		
IC74	G4	IC332	D4	IC782	G3		
IC101	H4	IC336	H1	IC783	I3		
IC102	G4	IC337	G1	IC784	H3		
IC103	H3	IC338	H1	IC800	I4		
IC104	H4	IC339	G1	IC801	I5		
IC106	G4	IC381	I2	IC802	I4		
IC107	G3	IC401	H4	IC803	I4		
IC112	G3	IC402	J4	IC804	H3		
IC114	F2	IC403	J4	IC871	I1		
IC115	F2	IC440	H3	IC911	I1		
IC116	G2	IC442	F2	IC912	I1		
IC130	E1	IC464	D1	IC913	I1		
IC132	F1	IC465	C4	IC983	I4		
IC133	F1	IC540	A2	IC986	H4		
IC170	G3	IC541	B2	IC1020	H2		
IC171	G3	IC544	A1	IC1021	G2		
IC173	F3	IC545	A2	IC1022	I2		
IC174	F3	IC546	A2	IC1050	C1		

JUMPER WIRE INFORMATION

Ⓐ IC782 - 17pin (FOIL SIDE) ⟷ IC780 - 94pin (COMPONENT SIDE)
Ⓑ IC986 - 11pin (FOIL SIDE) ⟷ IC780 - 90pin (COMPONENT SIDE)
Ⓒ IC986 - 10pin (FOIL SIDE) ⟷ IC780 - 12pin (COMPONENT SIDE)
Ⓓ IC440 - 08pin (FOIL SIDE) ⟷ IC780 - 47pin (COMPONENT SIDE)
Ⓔ IC440 - 11pin (FOIL SIDE) ⟷ IC780 - 50pin (COMPONENT SIDE)



(FOIL SIDE)

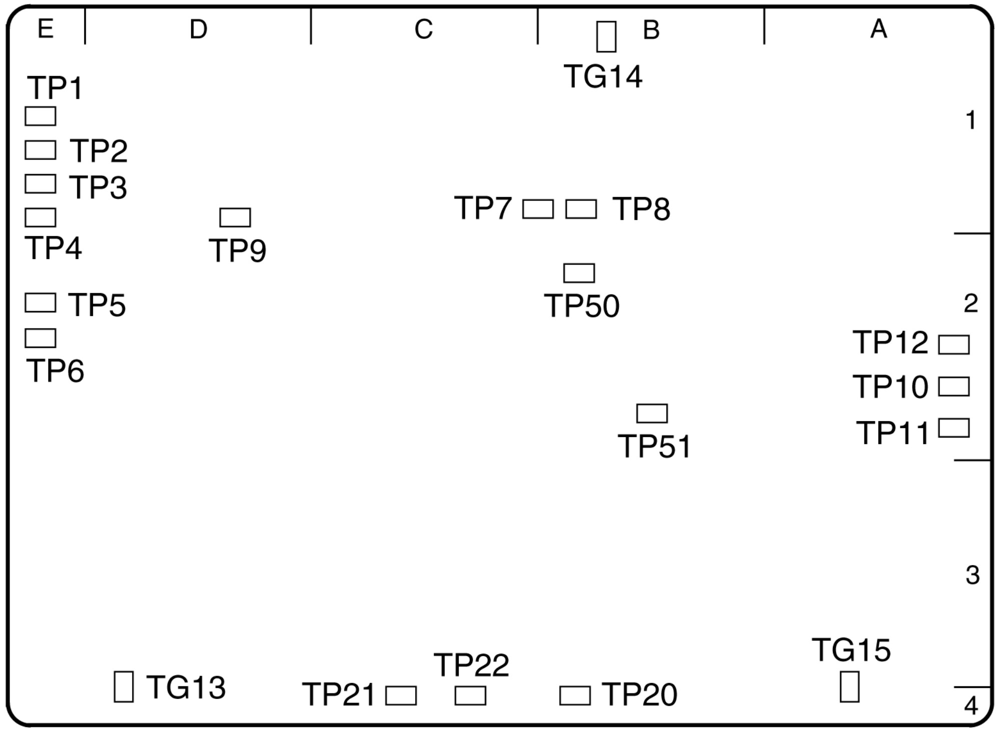
CBA-9

CBA-9

VBLK SUB P.C.BOARD (NTSC:VEP83405A,PAL:VEP83405B)

COMPONENT SIDE

REF	LOC
IC20	D3
IC21	D3
IC22	D3
IC23	B3
IC24	C3
IC25	B3
IC50	C1
IC51	C2
IC52	D1
IC53	D1
IC54	D1
IC55	D1
IC56	D2
IC101	B2
IC102	A2
IC103	B1
IC104	B1
IC105	A3
P1	E2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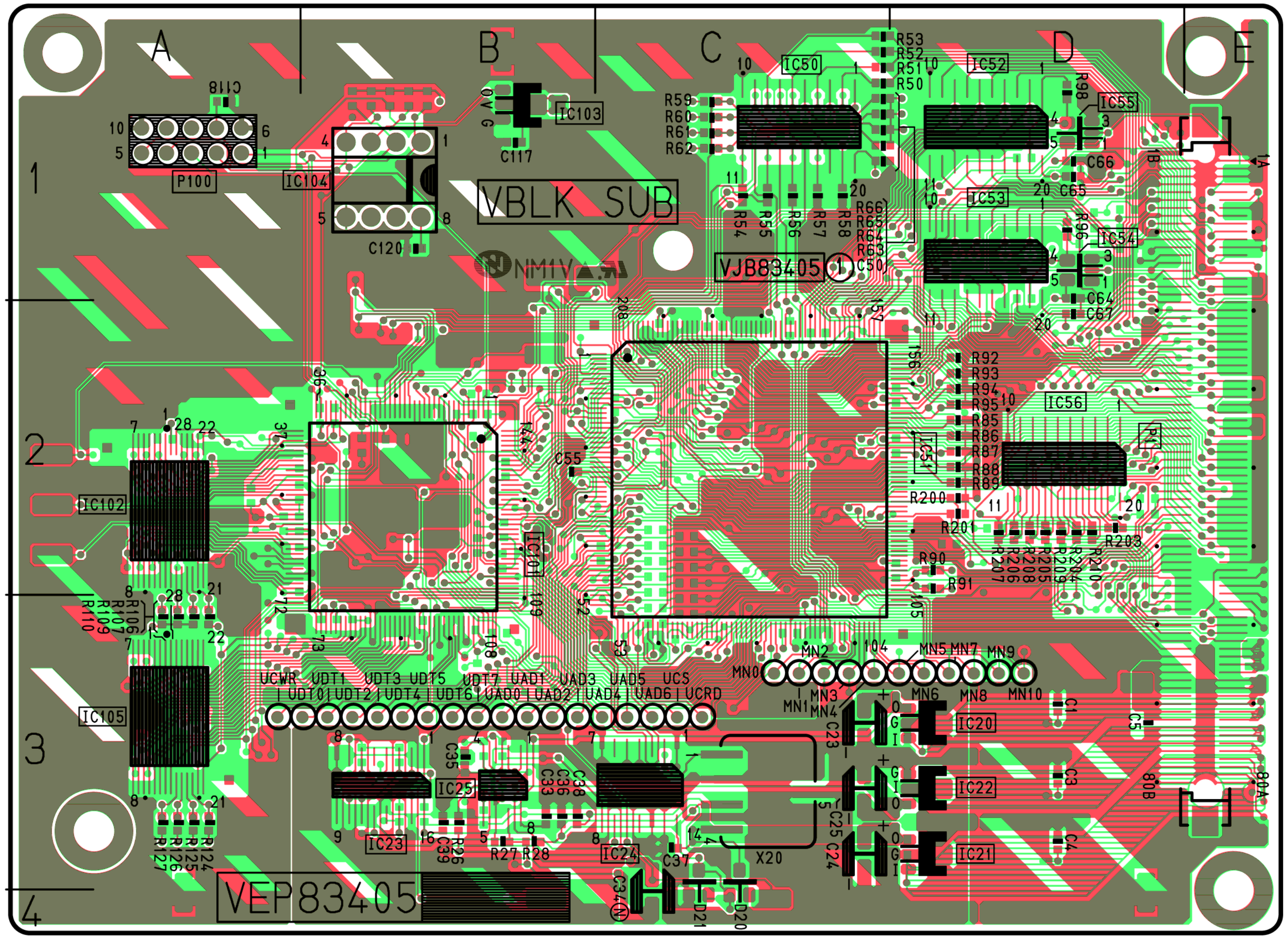
TP51
TG14
TP12
TP10
TP11
TG13
TP21
TP22
TP20
TG15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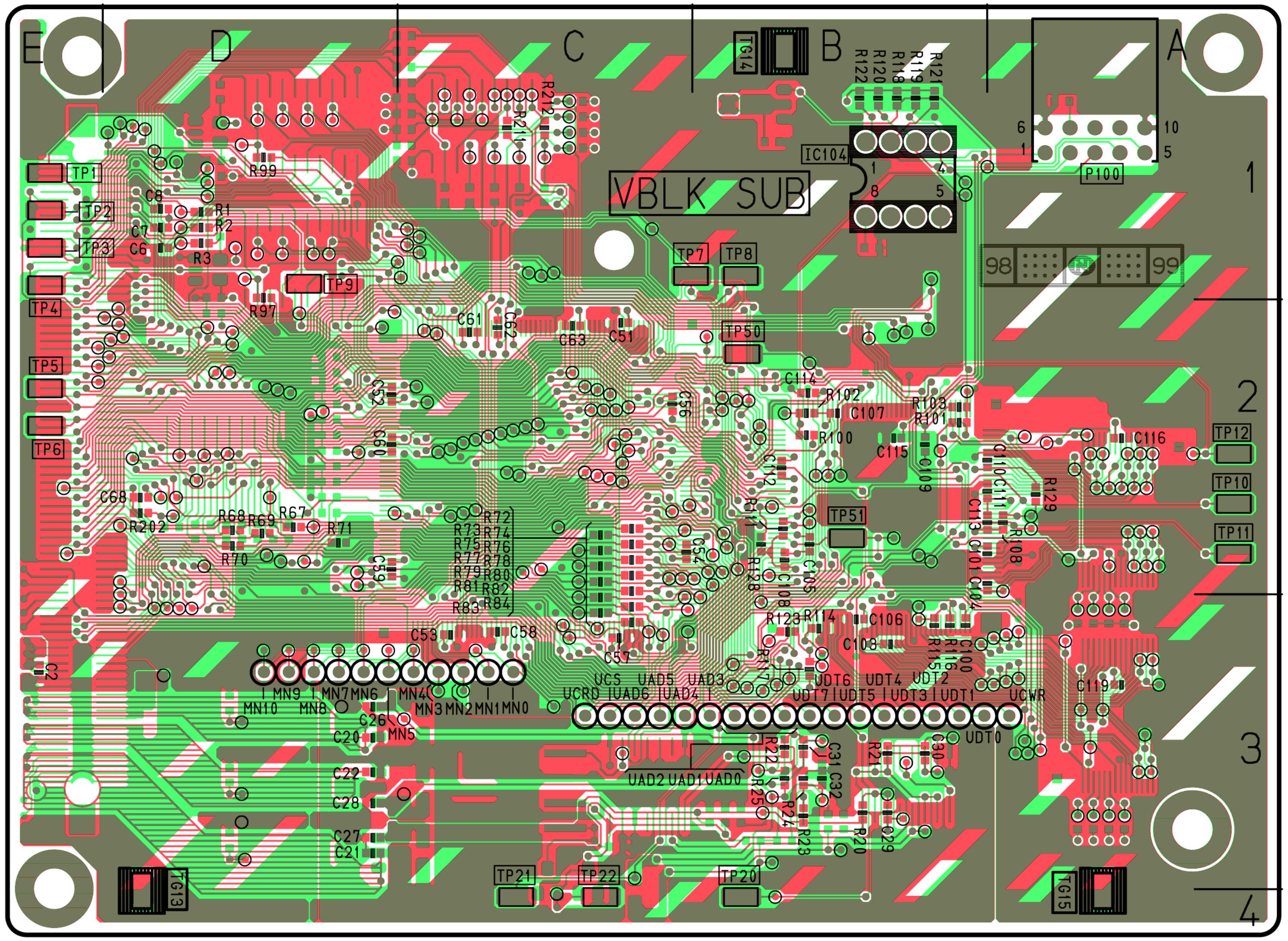
VBLK SUB
VJB83405
VEP83405
P100
IC101
IC102
IC103
IC104
IC105
IC20
IC21
IC22
IC23
IC24
IC25
IC50
IC51
IC52
IC53
IC54
IC55
IC56
C117
C118
C120
X20
D20
D21

(COMPONENT SIDE)

VBLK SUB P.C.BOARD (NTSC:VEP83405A,PAL:VEP83405B)

FOIL SIDE

REF	LOC
P100	B1
TG13	E4
TG14	C1
TG15	B4
TP1	E1
TP2	E1
TP3	E1
TP4	E1
TP5	E2
TP6	E2
TP7	C1
TP8	C1
TP9	D1
TP10	A2
TP11	A2
TP12	A2
TP20	C4
TP21	D4
TP22	C4
TP50	C2
TP51	C2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VBLK SUB
IC104
P100
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TP20
TP21
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TP50
TP51
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R99
R97
R1
R2
R3
C6
C7
C8
C68
R202
R69
R67
R71
R70
C61
C62
C63
C51
C114
R102
R103
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C107
R100
C115
C116
R129
C119
C106
C108
R123
UCS
UAD5
UAD3
UCRD
UAD6
UAD4
UDT6
UDT4
UDT2
UDT7
UDT5
UDT3
UDT1
UCWR
UDT0
UAD2
UAD1
UAD0
MN9
MN7
MN6
MN4
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MN0
MN5
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C27
C21
C26
C53
C58
C57
C3
R72
R73
R74
R75
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R78
R79
R80
R81
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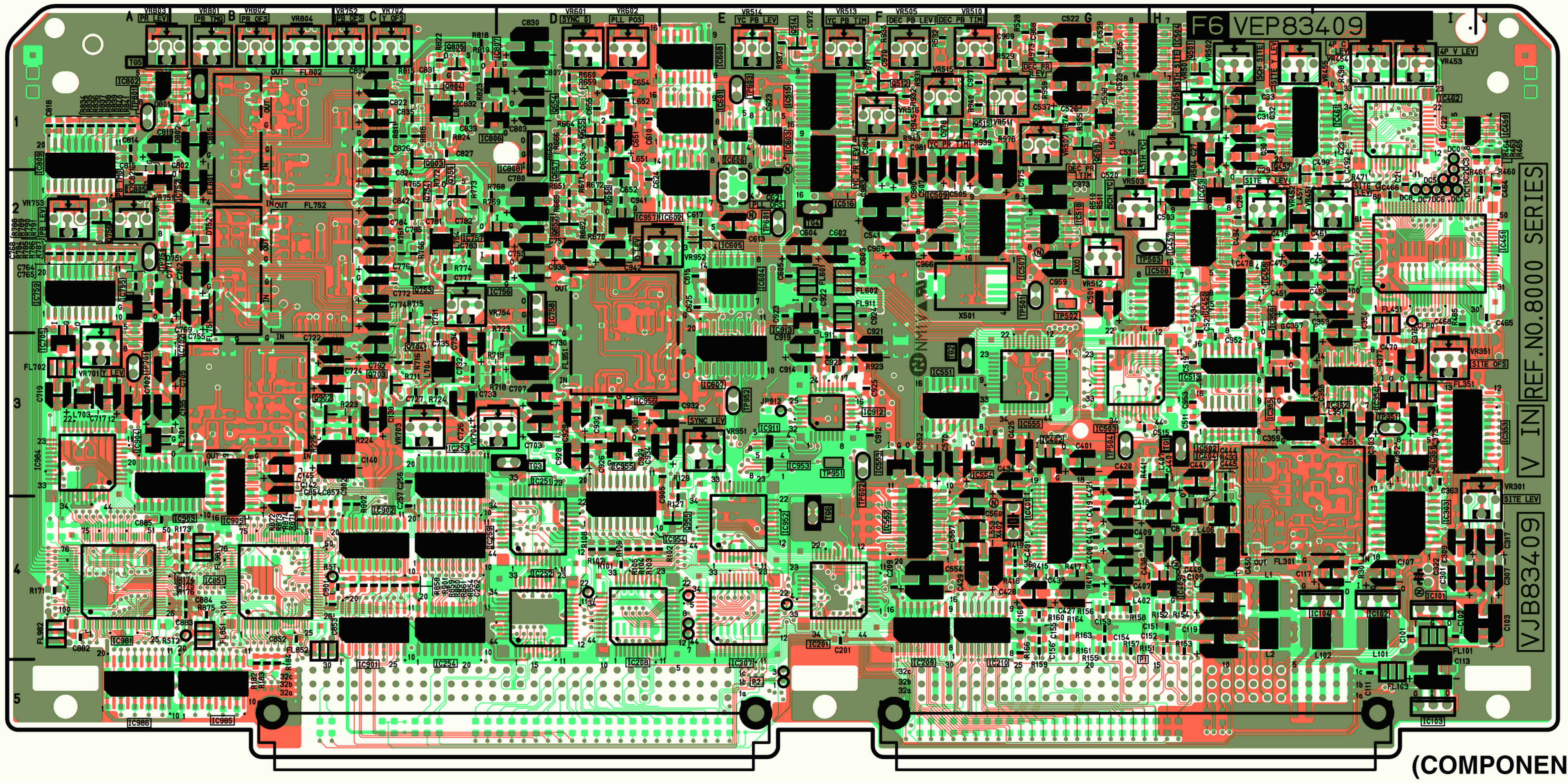
R83
R84
R212
R211
R122
R120
R118
R119
R121

(FOIL SIDE)

V IN -NTSC P.C.BOARD (NTSC:VEP83409A,NTSC:VEP83409B)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC101	I4	IC461	I1	IC756	C2	Q501	H1	TP502	G2	VR551	G1
IC102	I4	IC462	I1	IC757	C2	Q509	G1	TP503	H2	VR601	D1
IC103	I5	IC463	H2	IC758	D2	Q512	F1	TP504	G3	VR602	D1
IC104	I4	IC502	H4	IC759	A2	Q514	E1	TP601	E2	VR701	A3
IC201	F4	IC503	G3	IC802	A1	Q515	F1	TP602	F3	VR702	C1
IC207	E4	IC505	H1	IC805	A2	Q652	D2	TP603	E1	VR703	C3
IC208	D4	IC507	G2	IC805	C1	Q654	D1	TP701	A3	VR704	C3
IC209	F4	IC508	H2	IC807	C1	Q655	D1	TP751	A2	VR752	C1
IC210	G4	IC509	F2	IC808	D1	Q657	D1	TP801	A1	VR753	A2
IC251	D4	IC510	G2	IC809	A1	Q658	D2	TP951	F3	VR754	C2
IC252	D4	IC513	H3	IC851	B4	Q703	C3	TP952	E3	VR801	B1
IC253	C3	IC515	E1	IC901	C4	Q704	C3	VR301	J4	VR802	B1
IC254	C4	IC516	F2	IC902	C4	Q753	C2	VR351	I3	VR803	A1
IC259	C4	IC551	F3	IC903	B4	Q754	C2	VR451	I2	VR804	B1
IC309	I4	IC552	F4	IC904	A3	Q755	C2	VR452	H2	VR951	E3
IC351	I3	IC553	F3	IC905	B4	Q756	A2	VR453	I1	VR952	E2
IC352	I3	IC554	G3	IC911	E3	Q803	C1	VR454	I1		
IC353	J3	IC555	G3	IC912	F3	Q804	C1	VR455	H1		
IC354	I3	IC601	E1	IC913	E3	Q805	C1	VR501	H1		
IC355	H3	IC602	E2	IC952	E4	Q902	B3	VR502	H1		
IC356	H2	IC603	E1	IC953	E3	Q955	E4	VR503	G2		
IC401	G4	IC604	E2	IC954	D4	P2	E5	VR504	H1		
IC402	G3	IC605	E2	IC955	D3	TG1	H3	VR505	F1		
IC403	H4	IC606	E2	IC956	D3	TG2	F3	VR507	G1		
IC404	H4	IC607	E3	IC957	D2	TG3	D3	VR510	F1		
IC450	H2	IC608	E1	IC981	A4	TG4	E2	VR512	G2		
IC451	I2	IC702	B3	IC984	A3	TG5	B1	VR513	F1		
IC457	H2	IC705	A3	IC985	B5	TG6	E4	VR514	E1		
IC458	H2	IC752	B2	IC986	A5	TP351	I3	VR515	F1		
IC459	I1	IC755	A2	Q452	H2	TP501	G2	VR516	F1		



(COMPONENT SIDE)

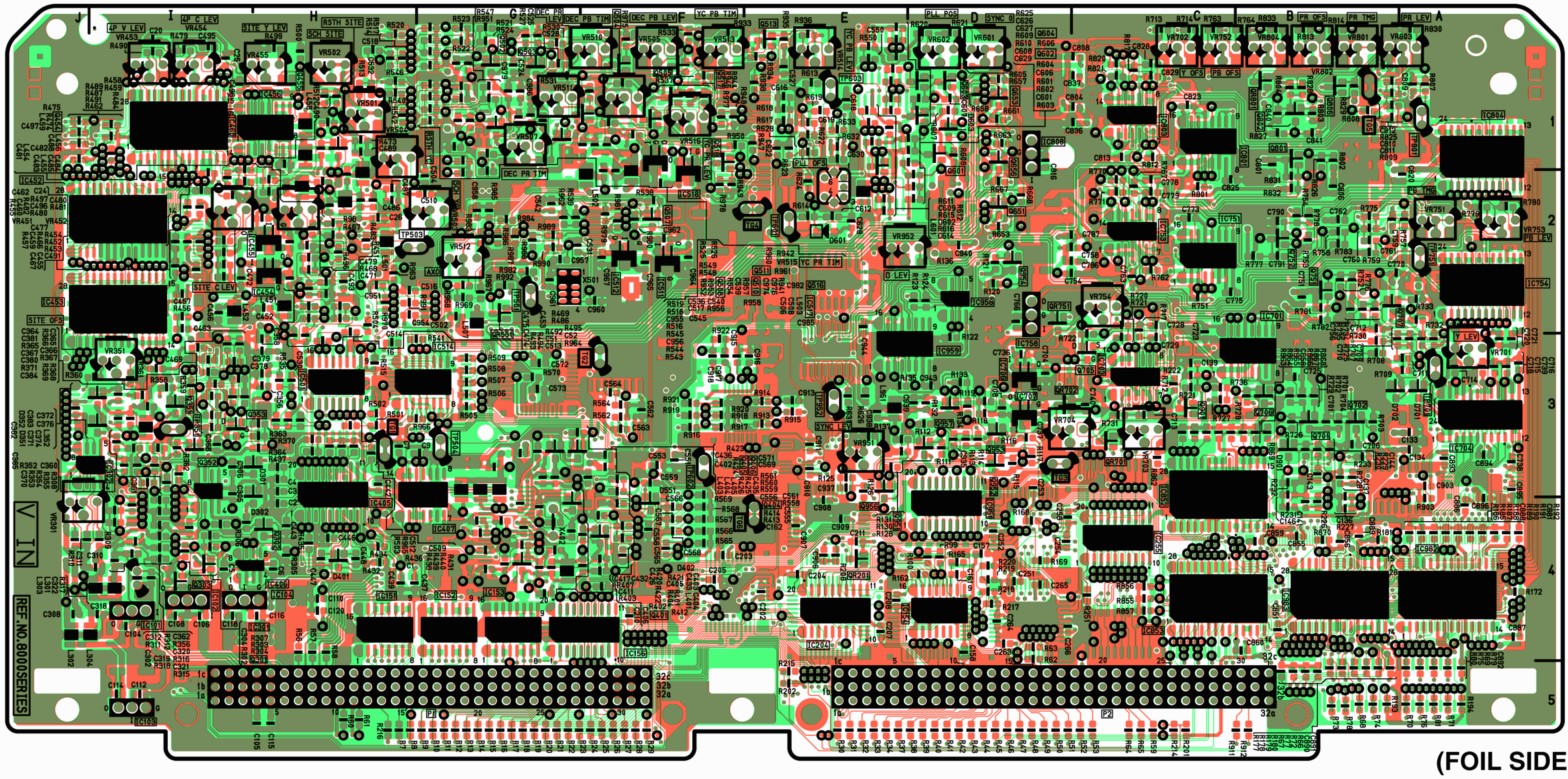
CBA-12

CBA-12

V IN-NTSC P.C.BOARD (NTSC:VEP83409JAPAN,NTSC:VEP83409OVER SEAS)

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC101	I4	IC706	D3	Q502	G1	Q951	D3	VR301	J4	VR801	B1
IC102	I4	IC707	D3	Q503	G1	Q952	D3	VR351	I3	VR802	B1
IC103	I5	IC710	B3	Q504	F1	Q953	D3	VR451	I2	VR803	A1
IC104	H4	IC751	C1	Q505	F1	Q954	D2	VR452	H2	VR804	B1
IC151	H4	IC753	C2	Q507	F2	Q956	E3	VR453	I1	VR951	E3
IC152	G4	IC754	A2	Q508	G1	Q957	D3	VR454	I1	VR952	D2
IC153	G4	IC758	D2	Q510	G1	QR201	E4	VR455	H1		
IC154	D4	IC801	C1	Q511	F1	QR551	G2	VR501	H1		
IC156	F4	IC803	C1	Q513	E1	QR701	C3	VR502	H1		
IC204	E4	IC804	A1	Q516	F1	QR702	D3	VR503	G2		
IC255	C4	IC808	D1	Q517	F1	QR751	D2	VR504	H1		
IC301	I3	IC852	C3	Q518	F1	QR801	B1	VR505	F1		
IC302	I3	IC853	C4	Q601	D1	P2	C5	VR507	G1		
IC405	H3	IC951	D4	Q602	D1	TG1	H3	VR510	F1		
IC406	H4	IC958	D2	Q603	D1	TG2	F3	VR511	G1		
IC407	G3	IC959	D3	Q604	D1	TG3	D3	VR512	G2		
IC452	I2	IC982	A4	Q651	D2	TG4	E2	VR513	F1		
IC453	I2	IC983	B4	Q653	D1	TG5	B1	VR514	E1		
IC454	H2	Q301	I4	Q656	D1	TG6	E4	VR515	F1		
IC455	H2	Q302	H4	Q701	B3	TP351	I3	VR516	F1		
IC456	H1	Q303	I4	Q702	B3	TP501	G2	VR601	D1		
IC460	I1	Q351	I3	Q705	C3	TP503	H2	VR602	D1		
IC501	H3	Q352	I3	Q706	B3	TP504	G3	VR701	A3		
IC511	F2	Q353	I3	Q707	B2	TP601	E2	VR702	C1		
IC512	F2	Q401	F4	Q751	B2	TP602	F3	VR703	C3		
IC514	G3	Q404	G3	Q752	B2	TP603	E1	VR704	D3		
IC517	F1	Q405	G3	Q801	B1	TP701	A3	VR751	A2		
IC518	F1	Q406	G3	Q802	B1	TP751	A2	VR752	C1		
IC703	C3	Q454	H1	Q806	B1	TP801	A1	VR753	A2		
IC704	A3	Q455	H1	Q901	C3	TP952	E3	VR754	C2		



(FOIL SIDE)

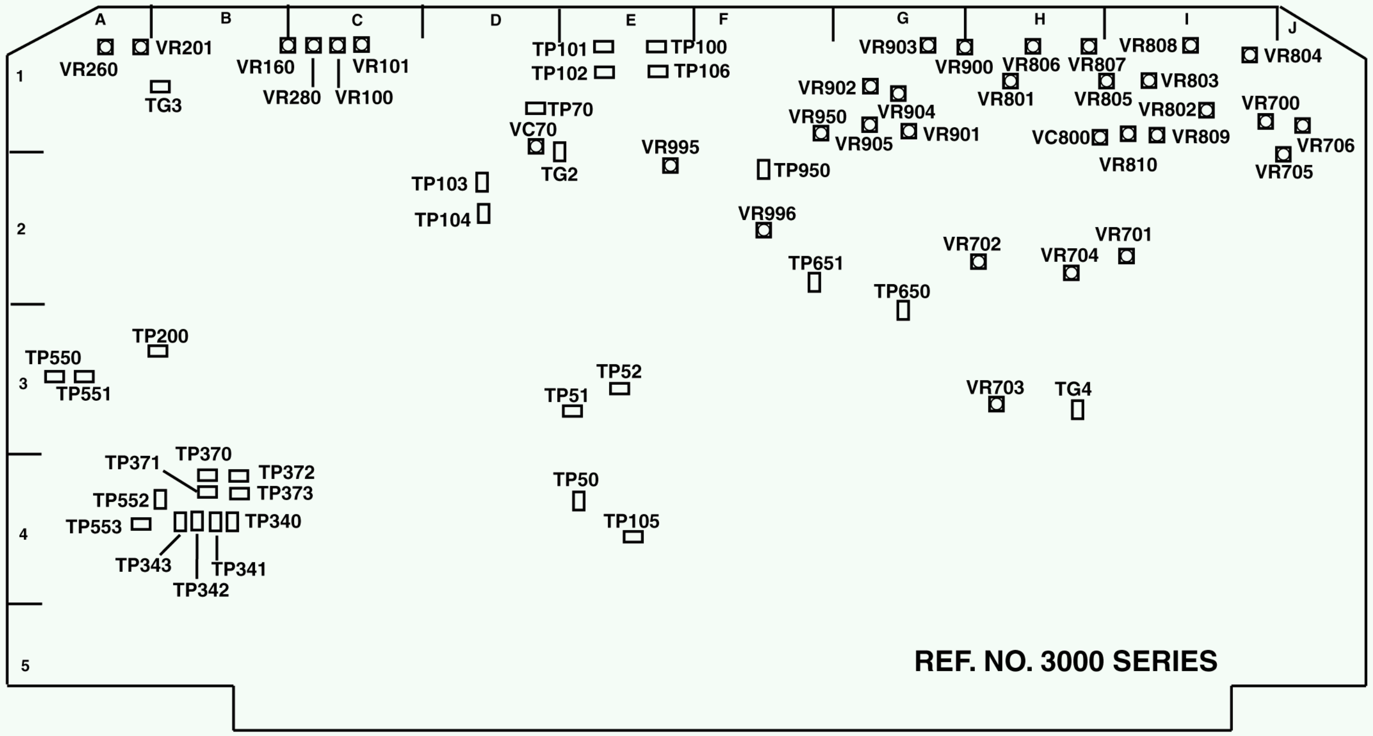
CBA-13

CBA-13

V OUT P.C.BOARD (NTSC:VEP83410A,NTSC:83410C,PAL:83410B)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3050	D2	IC3585	G3	Q3901	G1	TP3106	E1	VR3703	H3
IC3051	E4	IC3586	G3	Q3903	H1	TP3200	B3	VR3704	H2
IC3070	D1	IC3587	A4	Q3904	H2	TP3340	B4	VR3705	J2
IC3072	E1	IC3588	F3	Q3905	H2	TP3341	B4	VR3706	J1
IC3100	D1	IC3589	G4	Q3906	G1	TP3342	B4	VR3801	H1
IC3109	D2	IC3591	G4	Q3907	H1	TP3343	B4	VR3802	I1
IC3150	D3	IC3592	H4	Q3950	F1	TP3370	B4	VR3803	I1
IC3160	B1	IC3593	H4	Q3951	F1	TP3371	B4	VR3804	I1
IC3161	B1	IC3595	H4	Q3952	F1	TP3372	B4	VR3805	I1
IC3165	B1	IC3600	I4	Q3953	F1	TP3373	B4	VR3806	H1
IC3167	C2	IC3601	I4	Q3957	G1	TP3550	A3	VR3807	H1
IC3169	C2	IC3602	I4	Q3995	E2	TP3551	A3	VR3808	I1
IC3171	B1	IC3603	J4	QR3800	I2	TP3552	A4	VR3809	I1
IC3200	A2	IC3606	I4	QR3801	I2	TP3553	A4	VR3810	I1
IC3202	B1	IC3650	G2	SW3950	F1	TP3650	G3	VR3900	G1
IC3262	A1	IC3700	H4	TG3001	I5	TP3651	F2	VR3901	G1
IC3280	C2	IC3801	H2	TG3002	D2	TP3950	F2	VR3902	G1
IC3281	C2	IC3805	I2	TG3003	B1	VC3070	D1	VR3903	G1
IC3340	A4	IC3901	H2	TG3004	H3	VC3800	H1	VR3904	G1
IC3350	D4	IC3902	G2	TP3050	E4	VR3100	C1	VR3905	G1
IC3370	C4	IC3990	G2	TP3051	E3	VR3101	C1	VR3950	F1
IC3371	B4	IC3996	F2	TP3052	E3	VR3102	C1	VR3995	E2
IC3502	F4	IC3998	E1	TP3070	D1	VR3160	C1	VR3996	F2
IC3504	F4	P3001	G5	TP3100	E1	VR3201	A1		
IC3506	D3	P3002	D5	TP3101	E1	VR3260	A1		
IC3507	F3	P3370	A3	TP3102	E1	VR3280	C1		
IC3510	F3	Q3070	E2	TP3103	D2	VR3700	I1		
IC3511	F3	Q3704	H3	TP3104	D2	VR3701	I2		
IC3552	G4	Q3712	J3	TP3105	E4	VR3702	H2		



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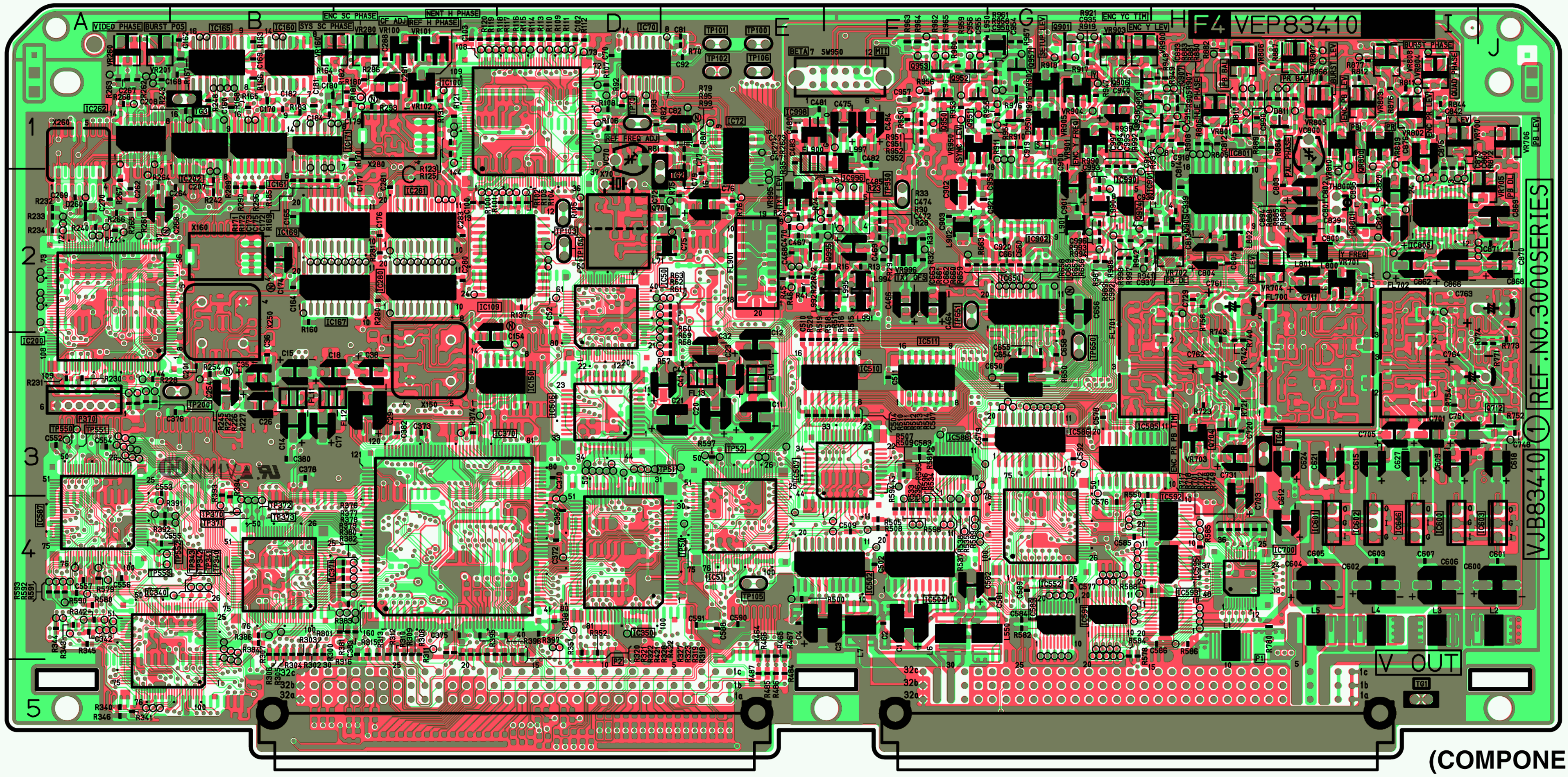
REF. NO. 3000 SERIES



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VIDEO PHASE
BURST POS
ENC SC PHASE
SYS SC PHASE
CF ADJ
REF H PHASE
NENT H PHASE
F4 VEP83410
V OUT
VJB83410
REF. NO. 3000SERIES

(COMPONENT SIDE)

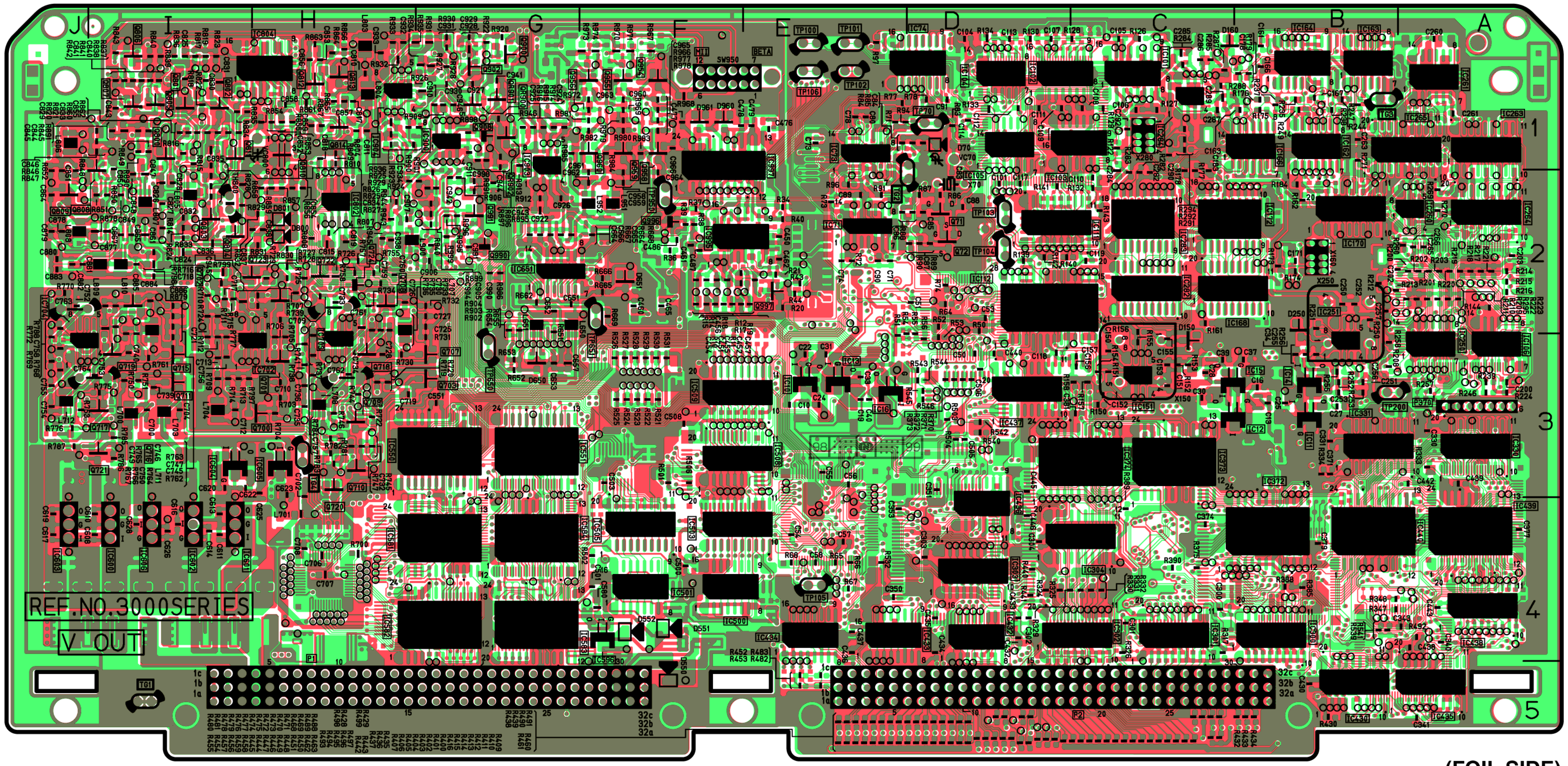
CBA-6

CBA-6

V OUT P.C.BOARD (NTSC:VEP83410A,NTSC:83410C,PAL:VEP83410B)

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3010	E3	IC3261	A1	IC3503	F4	Q3703	G3	Q3813	H1
IC3011	B3	IC3263	A1	IC3505	F4	Q3707	G3	Q3814	H1
IC3012	C3	IC3264	A2	IC3508	F3	Q3708	H2	Q3900	G1
IC3013	E3	IC3265	A1	IC3509	F3	Q3709	H3	Q3902	G1
IC3014	B3	IC3282	C2	IC3550	G3	Q3710	H3	Q3908	G1
IC3015	C3	IC3283	C2	IC3551	G3	Q3711	I3	Q3954	F1
IC3016	E3	IC3284	C1	IC3581	G4	Q3715	I3	Q3955	F1
IC3071	E2	IC3300	B4	IC3582	G4	Q3716	I2	Q3956	F1
IC3073	E1	IC3301	C4	IC3583	G4	Q3717	I3	Q3958	F1
IC3074	D1	IC3302	C4	IC3584	G4	Q3718	H3	Q3959	F1
IC3101	C1	IC3303	D4	IC3596	F4	Q3719	I3	Q3960	F1
IC3102	D1	IC3304	C4	IC3604	I3	Q3720	H3	Q3990	G2
IC3103	C1	IC3330	A3	IC3605	H3	Q3721	I3	Q3991	G2
IC3104	D1	IC3331	B3	IC3651	G2	Q3722	H2	Q3996	F2
IC3105	D1	IC3372	B4	IC3702	H3	Q3723	I2	Q3997	E2
IC3106	A3	IC3373	C3	IC3703	H3	Q3724	H2	QR3900	G1
IC3111	D2	IC3374	C3	IC3704	J3	Q3800	I1	QR3901	G1
IC3112	D2	IC3430	B5	IC3802	H2	Q3801	I1	QR3902	G1
IC3151	C3	IC3432	D4	IC3804	H1	Q3802	I1		
IC3162	B1	IC3433	E4	IC3900	G1	Q3803	I2		
IC3163	B1	IC3434	E4	IC3903	G1	Q3804	I2		
IC3164	B1	IC3435	A5	IC3904	H1	Q3805	I1		
IC3166	B1	IC3436	D4	IC3995	F2	Q3806	I1		
IC3168	C2	IC3437	D3	IC3997	F1	Q3807	I1		
IC3170	B2	IC3438	A4	Q3071	D2	Q3808	I2		
IC3172	C2	IC3439	A4	Q3072	D2	Q3809	J2		
IC3250	A3	IC3440	B4	Q3700	H3	Q3810	H1		
IC3251	B3	IC3500	F4	Q3701	H3	Q3811	I1		
IC3260	A2	IC3501	F4	Q3702	H2	Q3812	H1		



(FOIL SIDE)

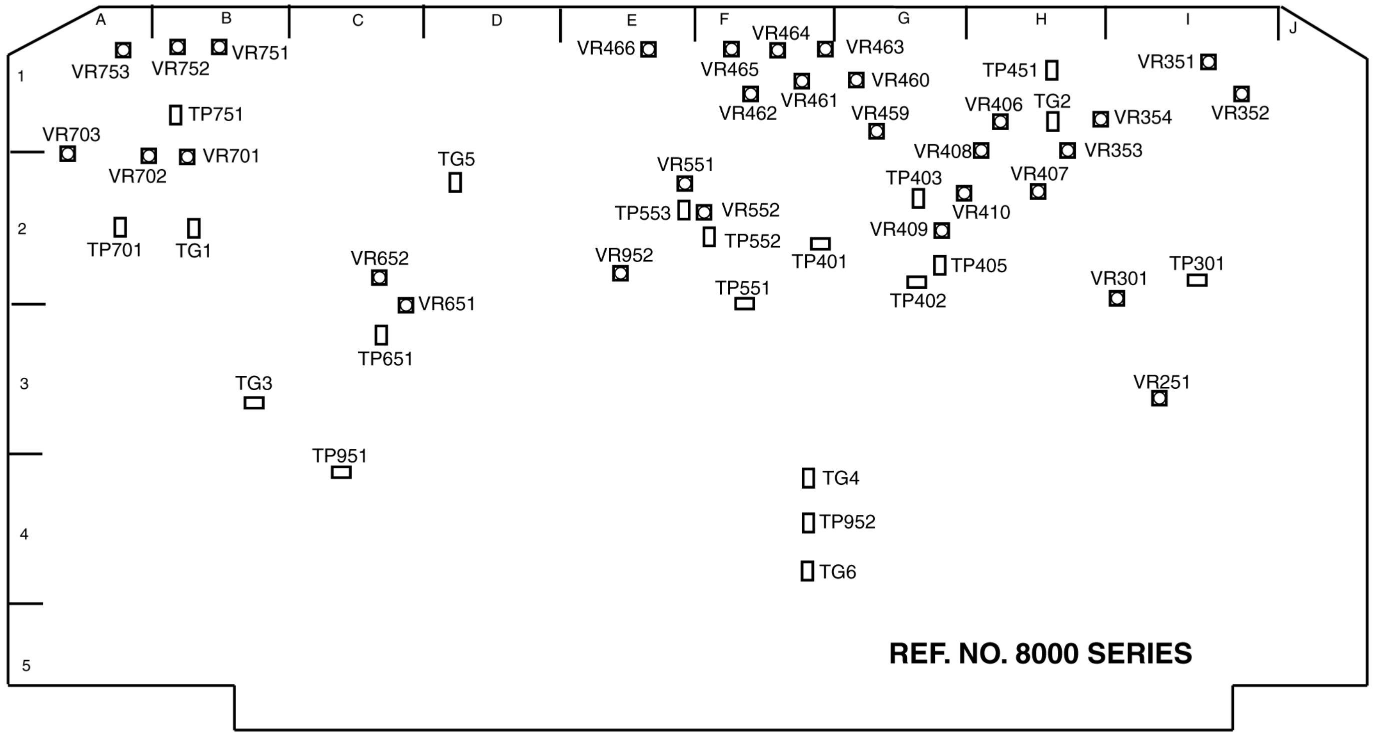
CBA-7

CBA-7

V IN -PAL P.C.BOARD FOR PAL (PAL:VEP83449A)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC51	I4	IC451	H1	IC955	E3	TP201	E3	TP951	C4	VR752	B1
IC52	I4	IC452	H1	IC956	E3	TP202	E4	TP952	F4	VR753	A1
IC53	I5	IC453	H1	IC957	F3	TP203	E3	VL551	F2	VR952	E2
IC54	H4	IC455	F1	IC958	E2	TP204	F4	VR251	I3		
IC102	H4	IC456	F1	IC981	E4	TP205	E4	VR301	I2		
IC110	G4	IC504	G3	IC985	D4	TP206	F4	VR351	I1		
IC153	B4	IC505	B3	IC986	D4	TP207	F4	VR352	I1		
IC164	C4	IC507	H3	P1	G5	TP208	F4	VR353	H1		
IC165	C4	IC551	G3	P2	D5	TP209	F4	VR354	H1		
IC201	F4	IC552	G2	P41	E1	TP210	F4	VR406	H1		
IC203	B4	IC554	F3	Q455	G1	TP211	F4	VR407	H2		
IC251	H3	IC567	G3	Q456	G1	TP212	F4	VR408	H1		
IC259	H4	IC655	D2	Q458	F1	TP213	F4	VR409	G2		
IC303	I3	IC656	C3	Q466	E1	TP214	F4	VR410	G2		
IC304	J3	IC660	C3	Q501	B2	TP215	F4	VR459	G1		
IC308	J2	IC705	C2	Q502	B2	TP216	F4	VR460	G1		
IC354	I2	IC706	A2	Q601	E2	TP217	F4	VR461	F1		
IC355	I1	IC710	A2	Q602	E1	TP218	F4	VR462	F1		
IC356	I2	IC711	A2	Q603	E2	TP301	I2	VR463	G1		
IC357	I1	IC712	D1	TG1	B2	TP401	F2	VR464	F1		
IC358	H1	IC755	C1	TG2	H1	TP402	G2	VR465	F1		
IC359	I1	IC756	B1	TG3	B3	TP403	G2	VR466	E1		
IC402	H3	IC760	A1	TG4	F4	TP405	G2	VR551	E2		
IC403	H2	IC762	D1	TG5	D2	TP451	H1	VR552	F2		
IC404	H2	IC802	B3	TG6	F4	TP551	F3	VR651	C3		
IC410	F2	IC854	B4	TP151	C4	TP552	F2	VR652	C2		
IC414	F2	IC855	A4	TP152	C4	TP553	E2	VR701	B2		
IC418	F2	IC856	B4	TP153	C4	TP651	C3	VR702	A2		
IC423	G2	IC902	G4	TP154	B4	TP701	A2	VR703	A2		
IC428	H3	IC903	G4	TP155	B4	TP751	B1	VR751	B1		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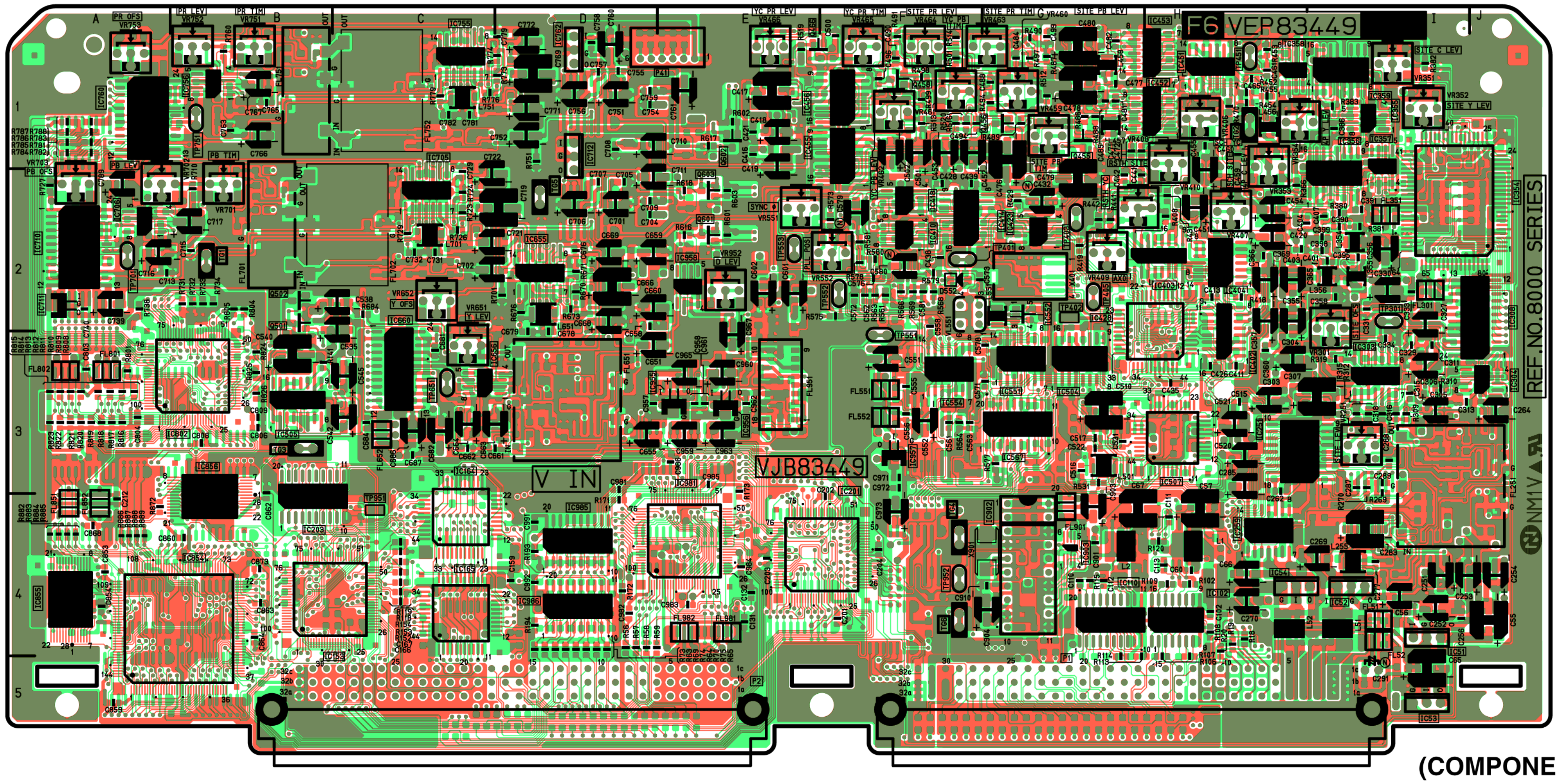
TP952
TG6
REF. NO. 8000 SERIES


F6 VEP83449
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(COMPONENT SIDE)

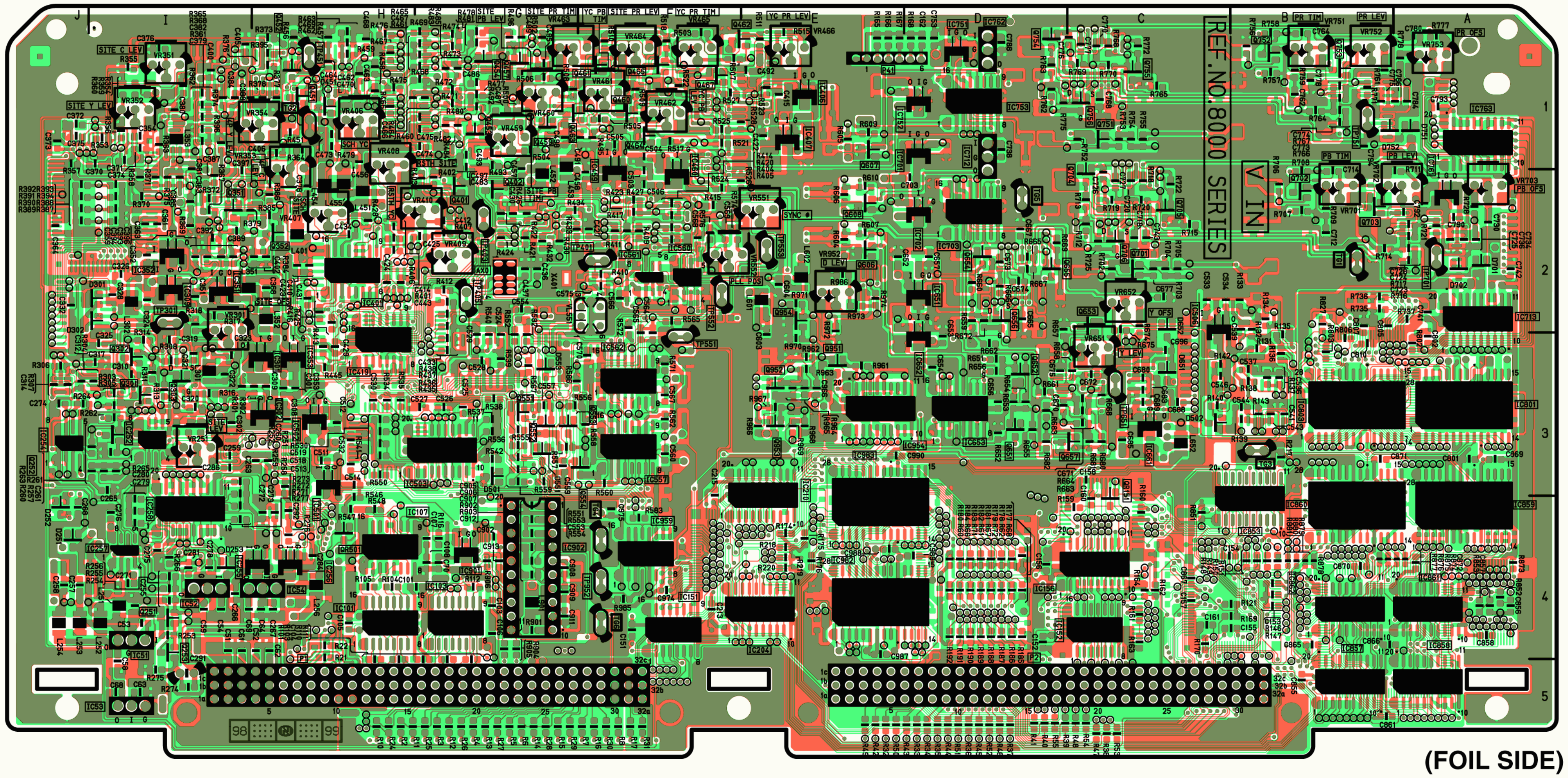
CBA-14

CBA-14

V IN-PAL P.C.BOARD FOR PAL (VEP83449A)

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC101	H4	IC557	F3	IC983	E4	Q608	E2
IC103	G4	IC560	F2	Q251	I4	Q651	D3
IC107	H4	IC561	F2	Q252	I3	Q652	D3
IC151	F4	IC562	F3	Q253	I4	Q653	C2
IC152	C4	IC651	D2	Q301	I3	Q654	D2
IC156	C4	IC652	D3	Q302	I3	Q655	D2
IC204	E4	IC653	D3	Q303	I3	Q656	D2
IC210	E3	IC661	C3	Q351	I2	Q657	C3
IC252	I3	IC701	D1	Q352	H2	Q701	C2
IC254	J3	IC702	D2	Q401	G2	Q702	B2
IC255	H4	IC703	D2	Q402	G2	Q703	B2
IC256	H4	IC713	A2	Q451	H1	Q704	C2
IC257	I4	IC751	D1	Q452	H1	Q705	C2
IC258	I4	IC752	D1	Q453	G1	Q706	C2
IC301	H3	IC753	D1	Q454	G1	Q751	C1
IC302	H3	IC761	A2	Q457	G1	Q752	B1
IC309	I2	IC763	A1	Q459	G1	Q753	B1
IC351	I2	IC801	A3	Q460	F1	Q754	D1
IC352	I2	IC803	B3	Q461	F1	Q755	C1
IC353	H3	IC853	B4	Q462	F1	Q756	C1
IC401	H2	IC857	B5	Q463	G1	Q951	E3
IC406	E1	IC858	A5	Q464	F1	Q952	E3
IC407	E1	IC859	A4	Q465	F1	Q953	E3
IC419	H3	IC860	B4	Q467	F1	Q954	E2
IC459	F2	IC861	A4	Q551	G3	QR151	C4
IC460	F2	IC862	B4	Q552	G3	QR501	H4
IC501	H3	IC901	G4	Q553	G3		
IC502	H3	IC954	E3	Q554	F3		
IC503	G3	IC959	F4	Q606	E2		
IC506	C2	IC982	E4	Q607	E1		



(FOIL SIDE)

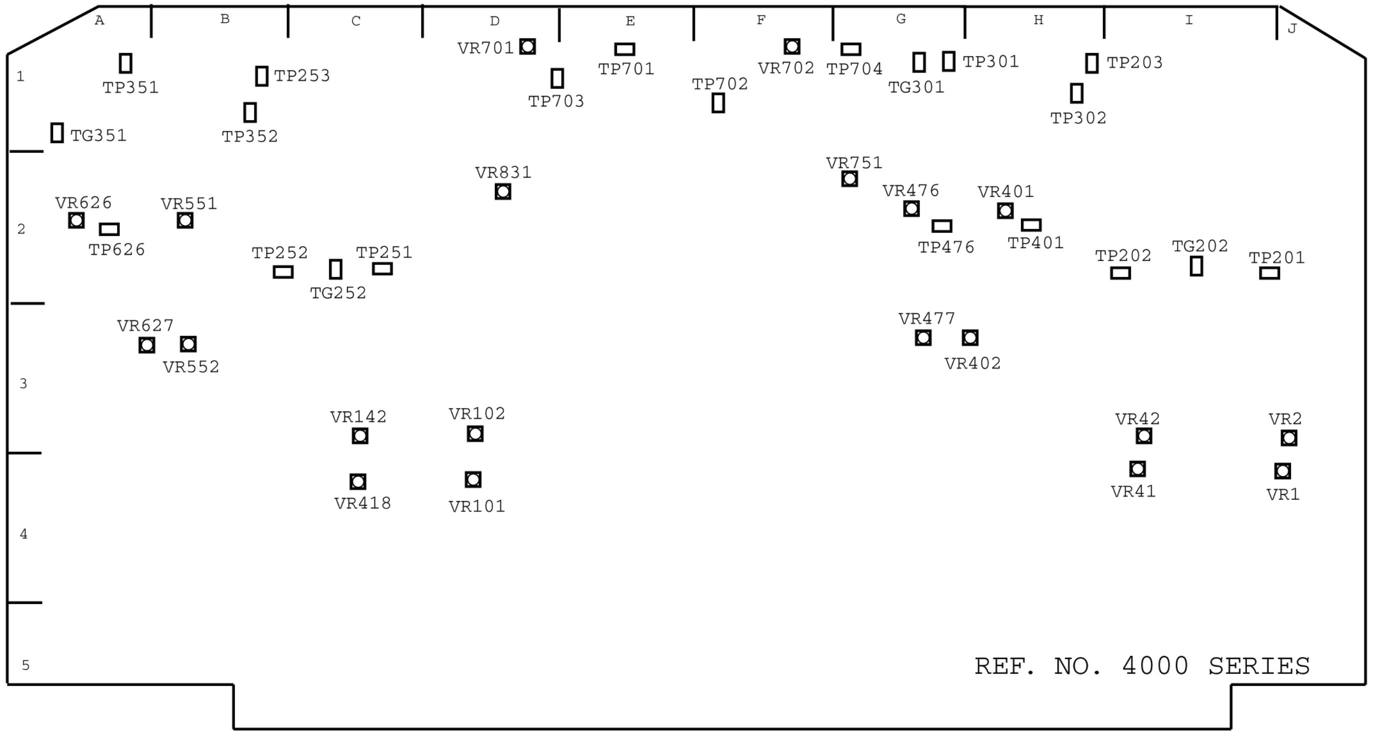
CBA-15

CBA-15

A ADDA P.C.BOARD (VEP84301B)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4001	I4	IC4355	B1	IC4938	F3	QR4402	H2	TP4401	H2
IC4002	I4	IC4357	B2	IC4939	E3	QR4476	H2	TP4476	G2
IC4006	I3	IC4358	A1	IC4940	E3	QR4477	H2	TP4551	B2
IC4008	J4	IC4401	H2	P4001	G5	QR4551	B2	TP4626	A2
IC4009	I3	IC4407	G4	P4002	D5	QR4552	B2	TP4701	E1
IC4041	H4	IC4408	H4	Q4402	H3	QR4626	A2	TP4702	F1
IC4042	I4	IC4476	G2	Q4403	H3	QR4627	A2	TP4703	D1
IC4047	H4	IC4480	G4	Q4404	H3	QR4701	F1	TP4704	G1
IC4048	H3	IC4481	G4	Q4405	G3	QR4702	D1	VR4001	J4
IC4049	H3	IC4551	B2	Q4477	G3	QR4703	F1	VR4002	J3
IC4101	C4	IC4557	B4	Q4478	G3	QR4704	D1	VR4041	I4
IC4102	C4	IC4558	B4	Q4479	G3	QR4705	F1	VR4042	I3
IC4106	C3	IC4626	A2	Q4480	G3	QR4752	F3	VR4101	D4
IC4108	D4	IC4630	A4	Q4552	B3	SW4001	I4	VR4102	D3
IC4109	C3	IC4631	A4	Q4553	B3	SW4041	I4	VR4141	C4
IC4141	C4	IC4702	F1	Q4554	B3	SW4101	D4	VR4142	C3
IC4142	C4	IC4753	F2	Q4555	B3	SW4141	C4	VR4401	H2
IC4147	C4	IC4754	F2	Q4627	B3	TG4202	I2	VR4402	H3
IC4148	C3	IC4755	G1	Q4628	A3	TG4252	C2	VR4476	G2
IC4149	C3	IC4756	G1	Q4629	A3	TG4301	G1	VR4477	G3
IC4203	I2	IC4757	F2	Q4630	A3	TG4351	A1	VR4551	B2
IC4204	I2	IC4758	G2	Q4753	F4	TP4201	I2	VR4552	B3
IC4205	I1	IC4833	D2	Q4755	F2	TP4202	I2	VR4626	A2
IC4253	C2	IC4834	E2	Q4756	F2	TP4203	H1	VR4627	A3
IC4254	C2	IC4835	E1	Q4757	F2	TP4251	C2	VR4701	D1
IC4255	C1	IC4836	D1	Q4758	G2	TP4252	B2	VR4702	F1
IC4302	H1	IC4837	E2	Q4831	E2	TP4253	B1	VR4751	G2
IC4305	H1	IC4838	D2	Q4832	E2	TP4301	G1	VR4831	D2
IC4307	H2	IC4931	E4	Q4833	D2	TP4302	H1		
IC4308	G1	IC4932	F4	Q4834	E2	TP4351	A1		
IC4352	B1	IC4935	F4	QR4401	H2	TP4352	B1		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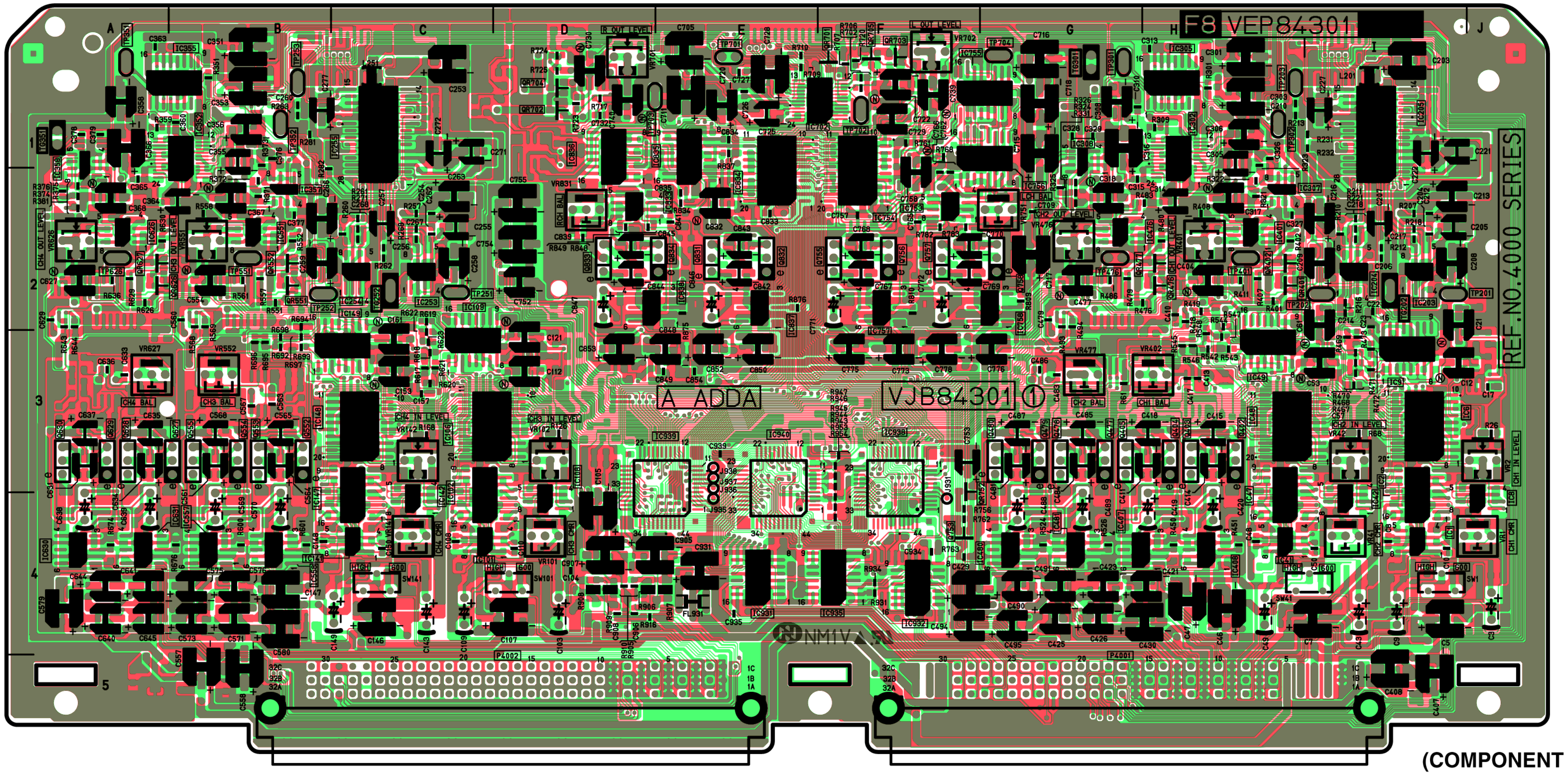
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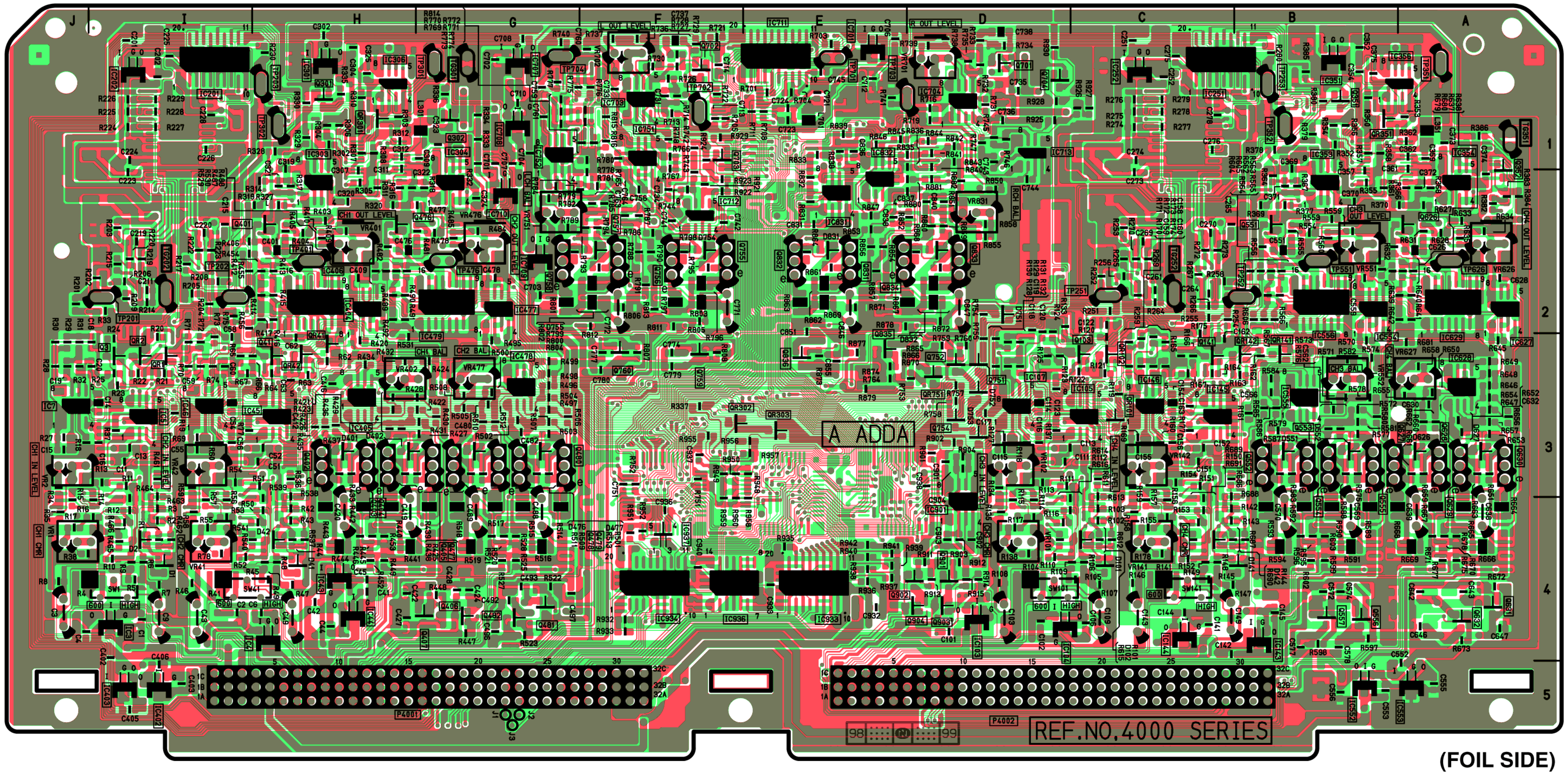
(COMPONENT SIDE)

A ADDA P.C.BOARD (VEP84301B)

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC4003	I4	IC4405	H3	IC4937	F4	Q4836	E3
IC4004	H4	IC4406	H2	Q4003	I3	Q4901	D4
IC4005	I3	IC4477	G2	Q4041	H3	Q4902	D4
IC4007	J3	IC4478	G3	Q4103	C3	Q4903	D4
IC4043	H4	IC4479	G2	Q4141	C3	Q4904	D4
IC4044	H4	IC4552	B5	Q4301	H1	QR4001	I3
IC4045	H3	IC4553	A5	Q4302	G1	QR4002	I3
IC4046	I3	IC4554	B2	Q4351	B1	QR4041	H3
IC4103	D4	IC4555	B3	Q4352	A2	QR4042	H3
IC4104	D4	IC4556	B2	Q4401	H2	QR4101	C3
IC4105	C3	IC4627	A2	Q4406	G4	QR4102	C3
IC4107	D3	IC4628	A3	Q4407	G4	QR4141	B3
IC4143	B4	IC4629	A2	Q4476	H2	QR4142	B3
IC4144	C4	IC4701	E1	Q4481	G4	QR4301	H1
IC4145	C3	IC4703	F1	Q4482	G4	QR4302	F3
IC4146	C3	IC4704	D1	Q4551	B2	QR4303	E3
IC4201	I1	IC4707	G1	Q4556	B4	QR4351	B1
IC4202	I1	IC4708	G1	Q4557	B4	QR4751	D3
IC4251	C1	IC4709	G2	Q4626	A2		
IC4252	C1	IC4710	G2	Q4631	A4		
IC4301	H1	IC4711	E1	Q4632	A4		
IC4303	H2	IC4712	F2	Q4701	D1		
IC4304	G2	IC4713	D1	Q4702	F1		
IC4306	H1	IC4751	F1	Q4703	F1		
IC4351	B1	IC4752	G1	Q4704	D1		
IC4353	B2	IC4831	E2	Q4751	D3		
IC4354	A2	IC4832	E2	Q4752	D3		
IC4356	A1	IC4901	D4	Q4754	D3		
IC4402	I5	IC4933	E4	Q4759	F3		
IC4403	I5	IC4934	F4	Q4760	F3		
IC4404	H2	IC4936	F4	Q4835	E3		



(FOIL SIDE)

CUE P.C.BOARD (VEP84302C)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC
IC4001	E1	IC4302	B4	QR4001	B1
IC4005	C1	IC4305	B4	SW4001	E1
IC4006	D1	IC4307	B3	SW4002	C2
IC4008	C2	IC4308	B3	SW4101	D4
IC4009	D4	IC4404	A3	TG4101	E2
IC4010	D4	IC4405	A3	TG4201	A1
IC4011	C2	IC4407	C3	TP4001	D2
IC4012	B1	IC4501	A3	TP4002	B1
IC4014	D1	IC4502	A4	TP4003	B1
IC4015	C2	IC4504	B4	TP4101	E3
IC4016	C2	IC4506	B4	TP4102	E2
IC4101	D3	IC4507	A3	TP4103	E2
IC4102	D3	P4001	C5	TP4201	C3
IC4107	D2	P4002	B1	TP4202	A1
IC4108	E2	P4003	A1	TP4203	A1
IC4109	E2	Q4001	B1	VR4001	D1
IC4110	C4	Q4002	B1	VR4002	C1
IC4111	E3	Q4004	B1	VR4003	B1
IC4112	D4	Q4005	B1	VR4004	B2
IC4113	D4	Q4201	D4	VR4005	D1
IC4114	E4	Q4202	C4	VR4006	C2
IC4201	C3	Q4203	C4	VR4007	C1
IC4204	D4	Q4204	C4	VR4201	C3
IC4205	C4	Q4207	A2	VR4202	B1
IC4206	A2	Q4213	A2		
IC4301	A4	Q4214	A2		

FOIL SIDE

REF	LOC	REF	LOC
IC4002	D1	Q4101	E4
IC4003	D2	Q4102	E3
IC4004	C1	Q4103	E3
IC4013	C1	Q4205	C4
IC4103	D3	Q4206	C4
IC4104	E3	Q4208	A2
IC4105	E3	Q4209	B2
IC4106	D3	Q4210	B2
IC4115	E4	Q4211	B2
IC4116	D4	Q4212	B2
IC4117	D3	Q4215	A2
IC4202	C2	Q4216	A2
IC4203	C3	Q4217	A2
IC4207	C2	Q4218	B2
IC4303	A4	Q4219	B2
IC4304	B4	QR4002	B1
IC4306	B4	QR4201	C4
IC4401	A3		
IC4402	A3		
IC4403	B4		
IC4406	D3		
IC4408	A3		
IC4503	A4		
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Q4003	B1		
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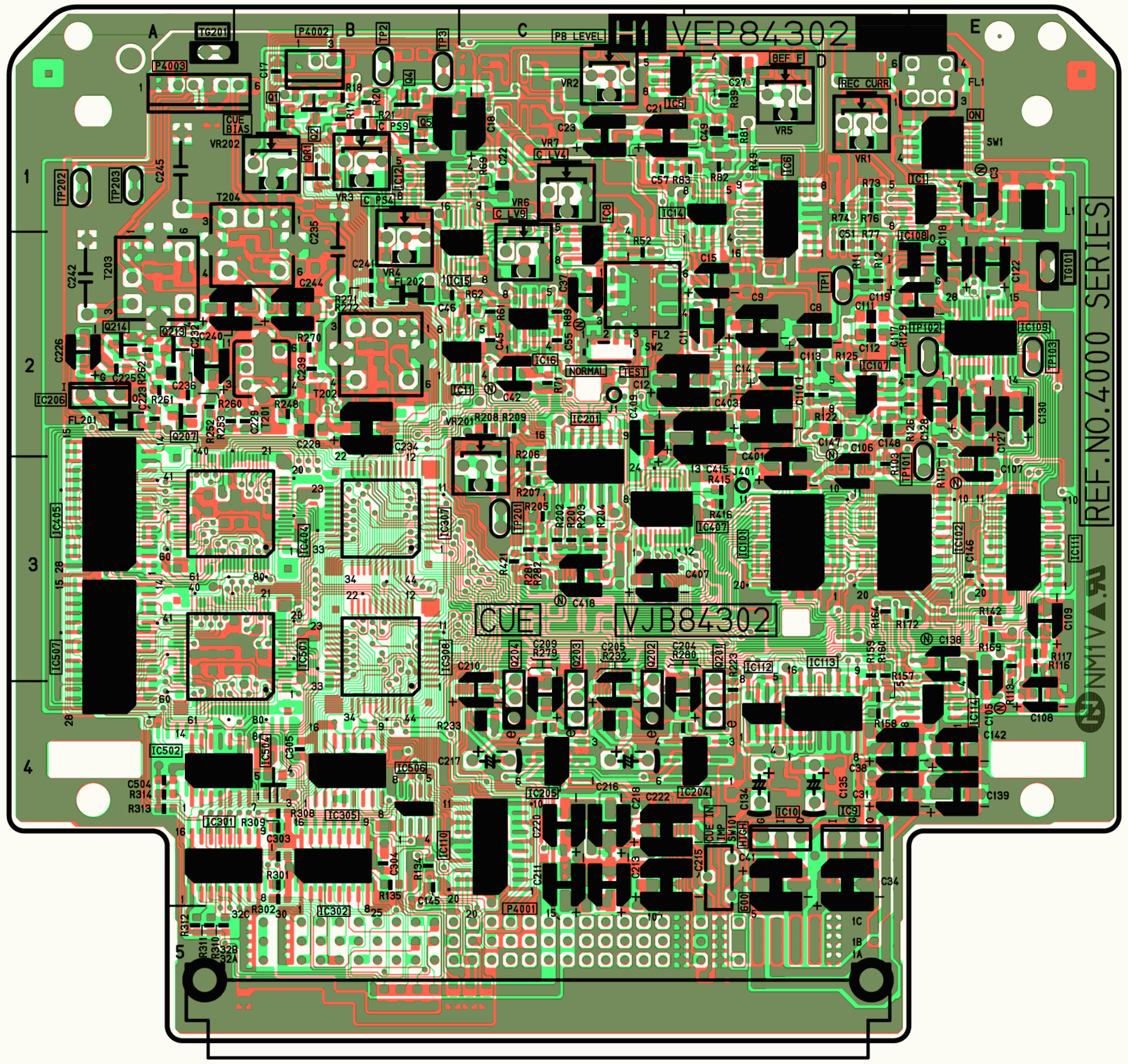
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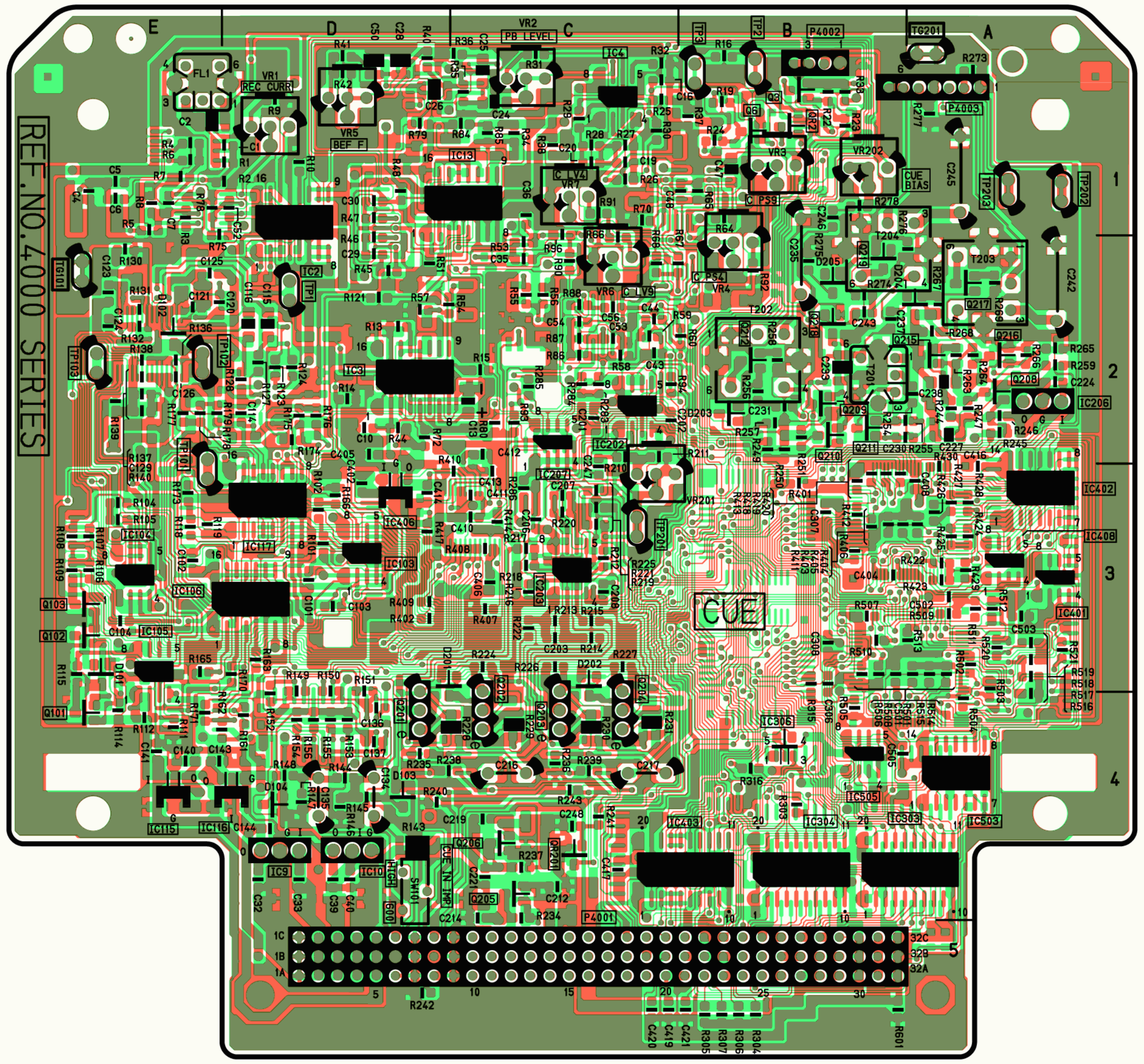
CUE BIAS

(COMPONENT SIDE)

CBA-1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REF.NO.4000 SERIES
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PB LEVEL
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CUE BIAS

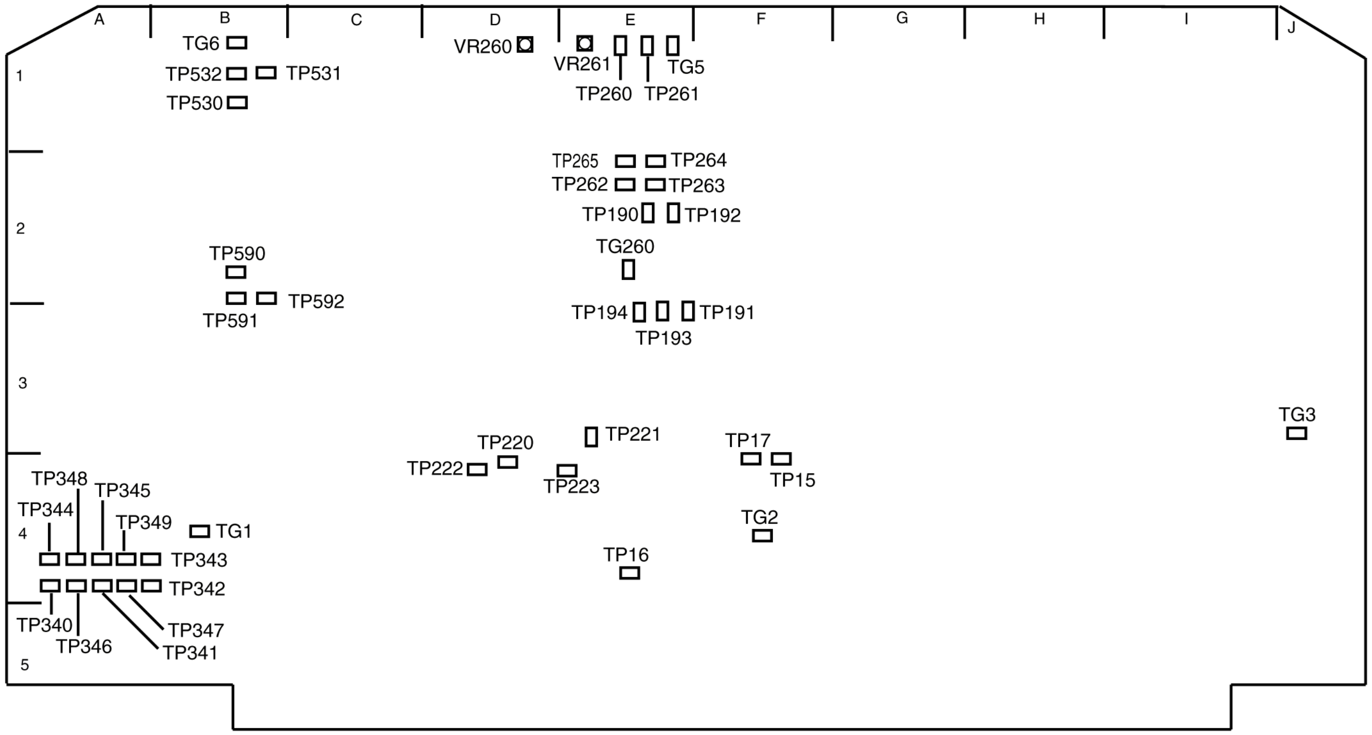
(FOIL SIDE)

CBA-1

A PROC P.C.BOARD(VEP84326A)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC15	F4	IC301	G3	IC873	H4	TP222	D4
IC16	E4	IC340	A4	IC921	I2	TP223	E4
IC17	C4	IC342	B1	P1	G5	TP260	E1
IC18	C4	IC381	B4	P2	D5	TP261	E1
IC19	F4	IC430	B2	P340	A1	TP262	E2
IC20	E4	IC432	A2	P650	G1	TP263	E2
IC22	D4	IC434	A2	P970	F2	TP264	E2
IC23	E4	IC435	B2	SW750	B4	TP265	E2
IC24	F4	IC436	A1	SW751	C4	TP340	A4
IC25	E4	IC490	B2	SW820	I5	TP341	A4
IC26	D4	IC491	A3	SW821	J4	TP342	B4
IC27	D4	IC492	B3	SW870	H4	TP343	B4
IC112	F3	IC493	A3	SW871	I4	TP344	A4
IC114	F2	IC531	C2	TG1	B4	TP345	A4
IC115	F3	IC533	C1	TG2	F4	TP346	A4
IC117	E4	IC592	C2	TG3	J3	TP347	A4
IC118	F1	IC594	C3	TG4	J1	TP348	A4
IC119	F2	IC651	H2	TG5	E1	TP349	A4
IC190	E2	IC652	H2	TG6	B1	TP530	B1
IC192	E3	IC653	G1	TG260	E2	TP531	B1
IC193	E3	IC720	D2	TP15	F3	TP532	B1
IC221	D4	IC721	E2	TP16	E4	TP590	B2
IC222	C4	IC722	D2	TP17	F3	TP591	B2
IC224	D3	IC723	E2	TP190	E2	TP592	B2
IC225	D4	IC750	B4	TP191	E3	VR260	D1
IC228	E2	IC751	B4	TP192	E2	VR261	E1
IC260	D2	IC821	H3	TP193	E3		
IC261	E2	IC823	J4	TP194	E3		
IC267	E1	IC826	H4	TP220	D4		
IC300	G4	IC870	I4	TP221	E3		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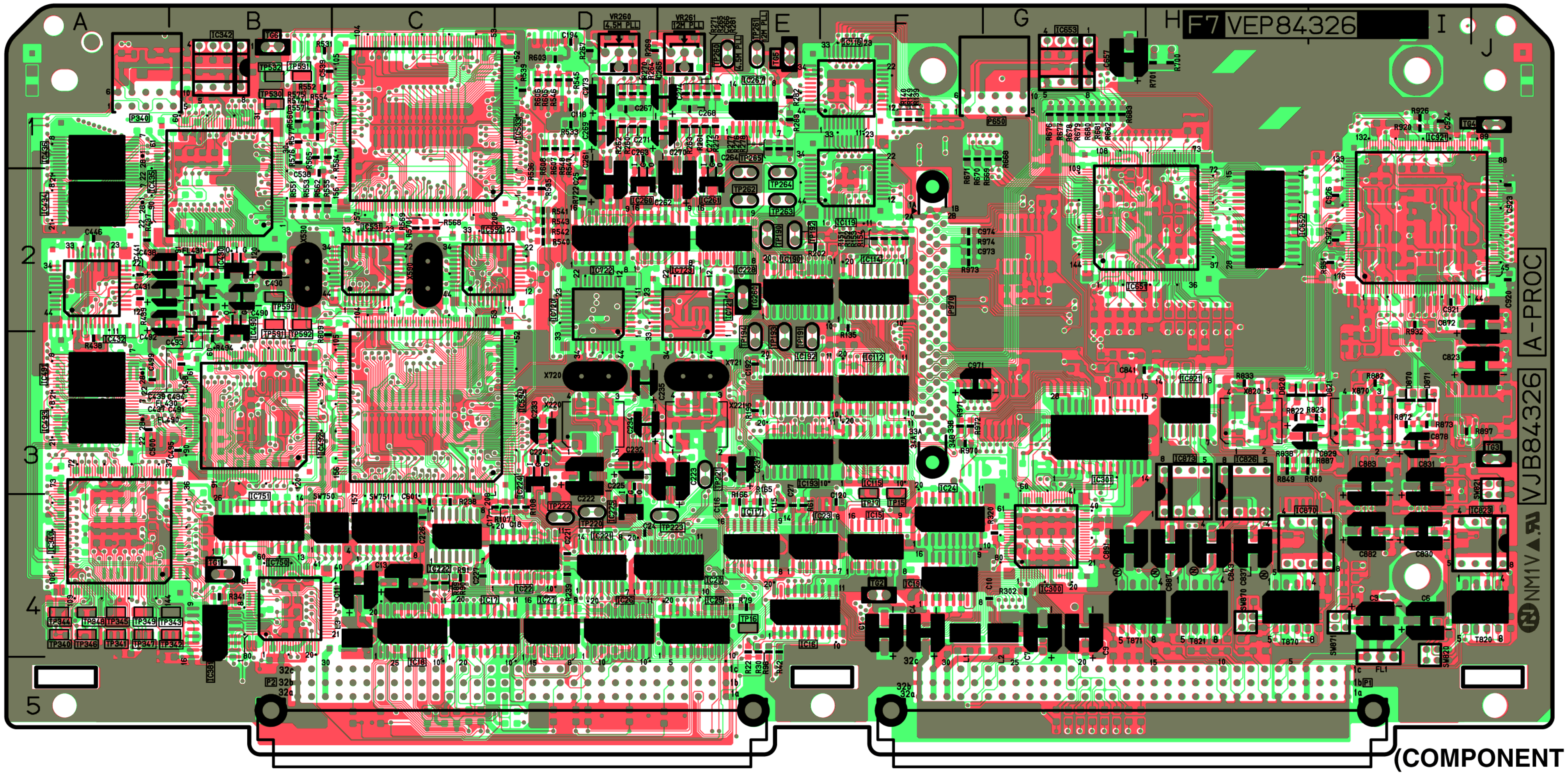
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VJB84326
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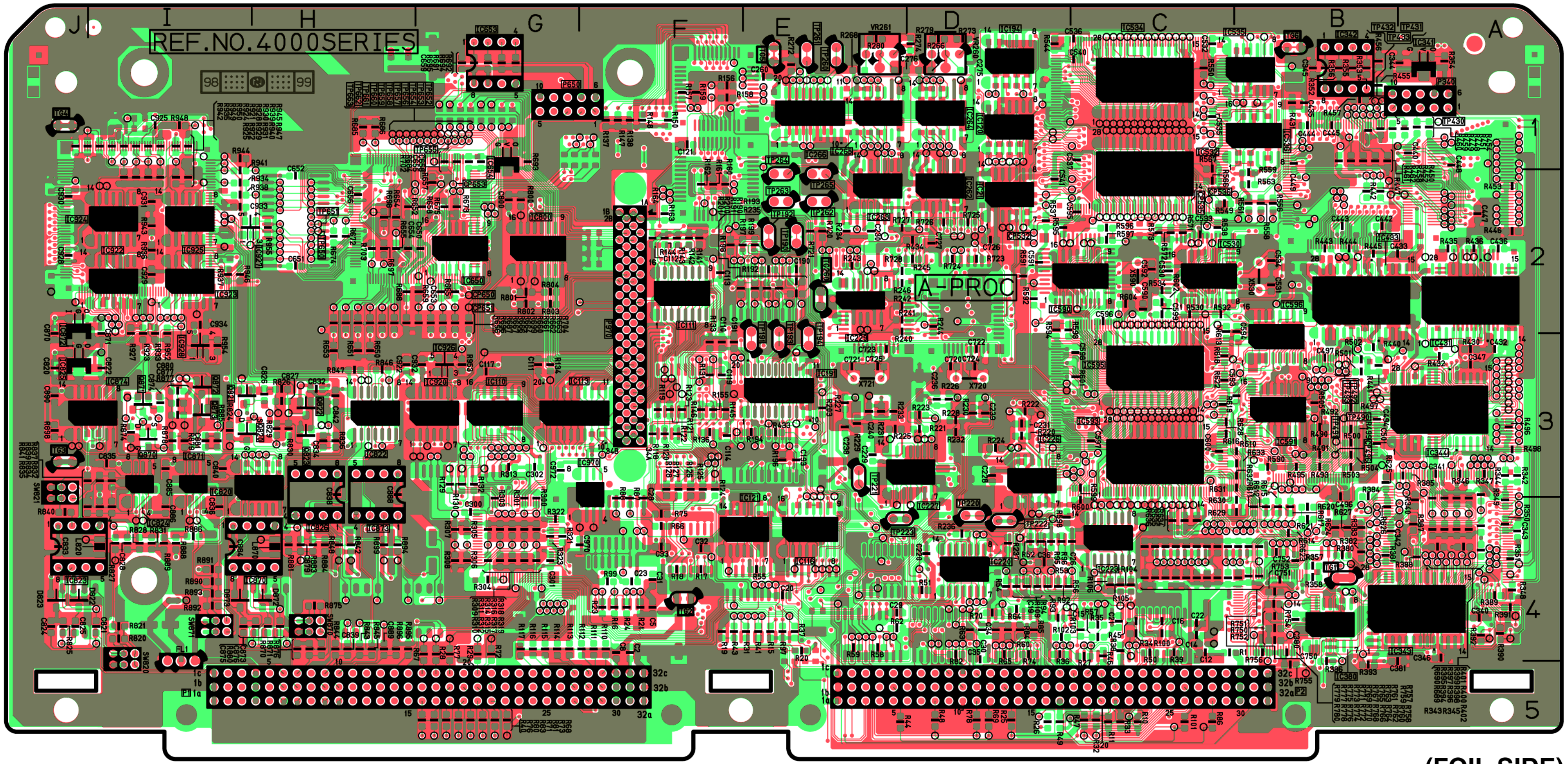
(COMPONENT SIDE)

CBA-16

CBA-16

A PROC P.C.BOARD(VEP84326A)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(FOIL SIDE)

CBA-17

CBA-17

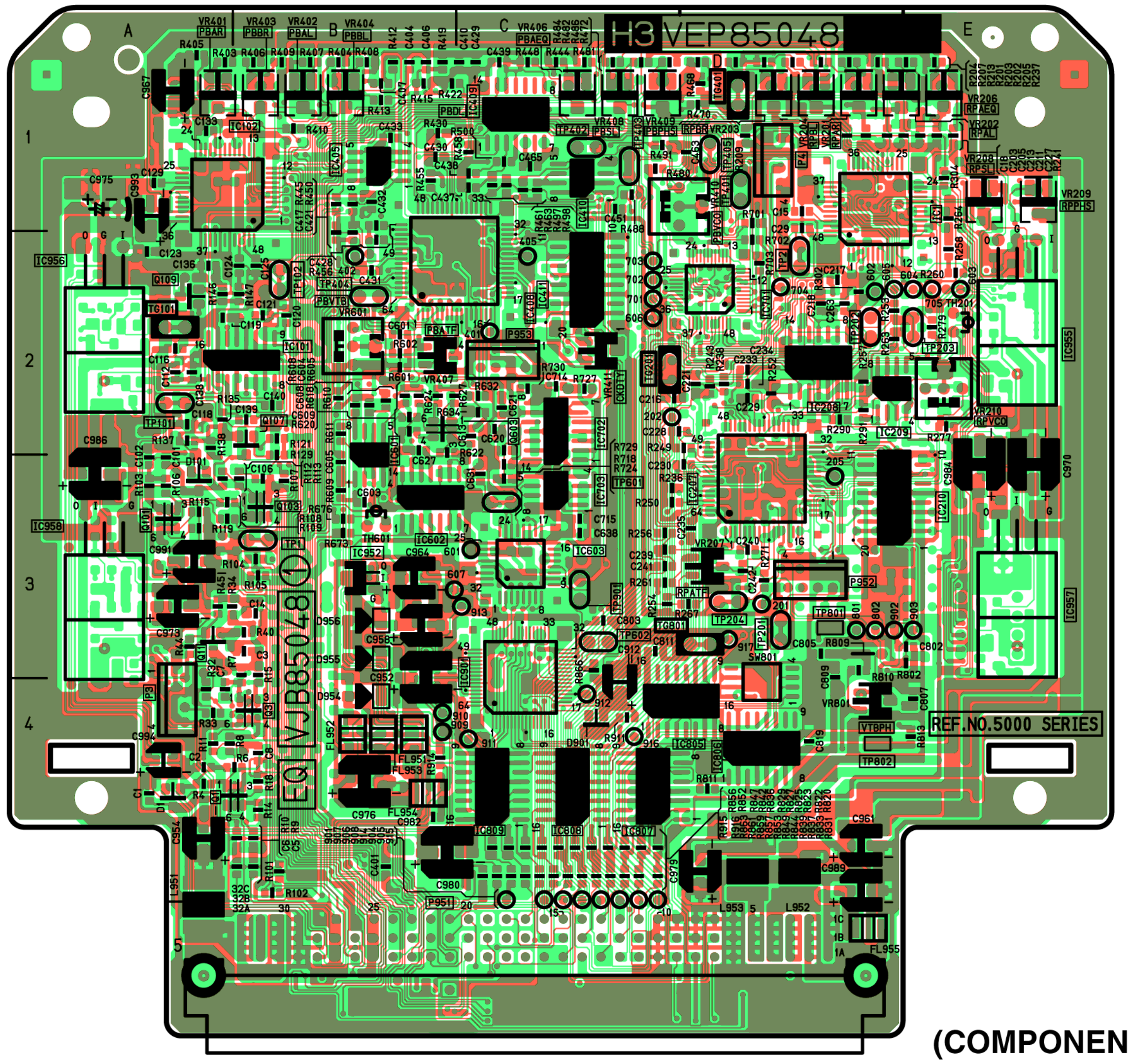
EQ P.C.BOARD (VEP85048A)

COMPONENT SIDE

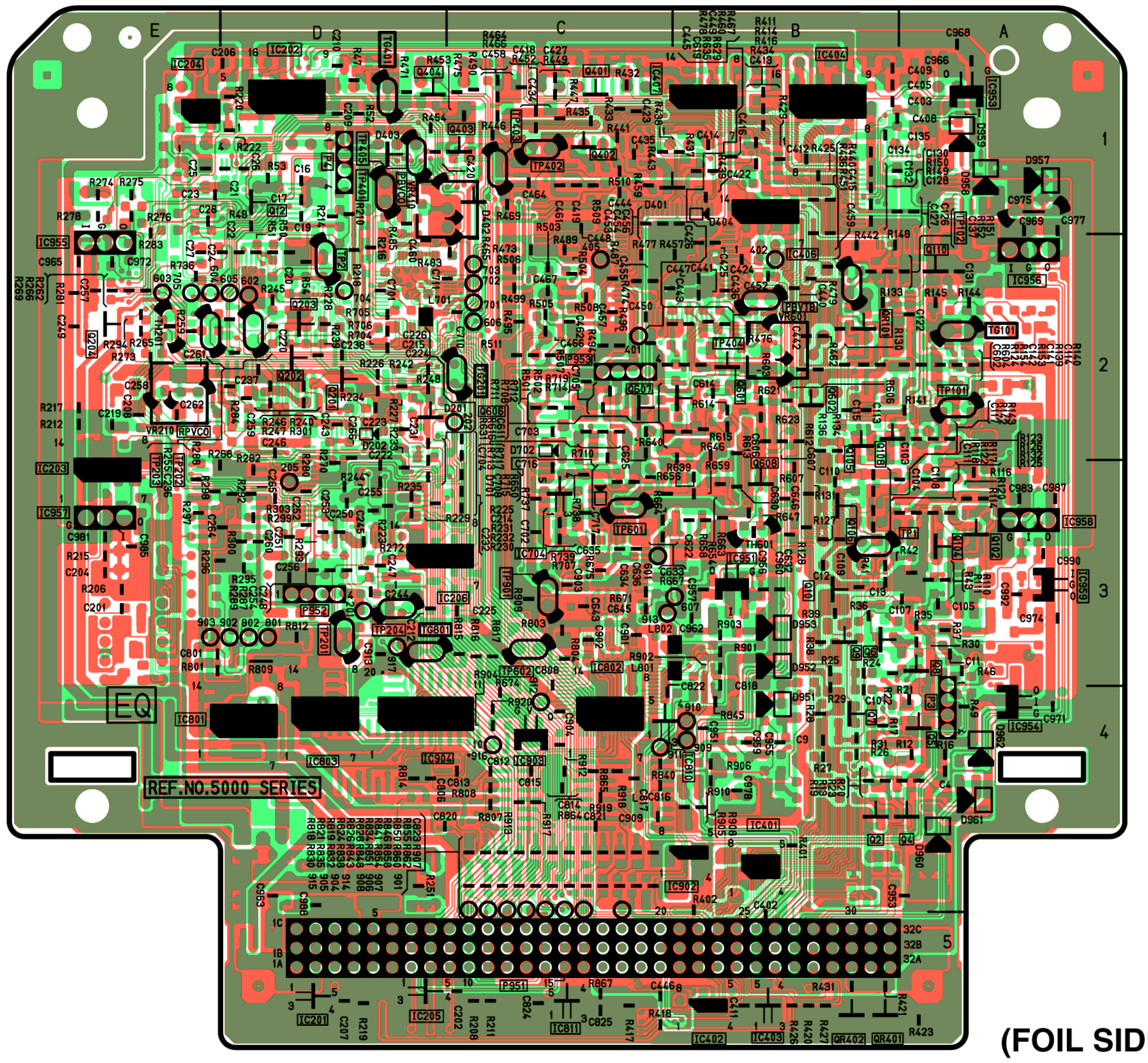
REF	LOC	REF	LOC
IC5955	E2	TP5405	D1
IC5956	A2	TP5601	C3
IC5957	E3	TP5602	C3
IC5958	A3	TP5901	C3
P5003	A3	VR5210	E2
P5004	D1	VR5410	D1
P5951	C5	VR5601	B2
P5952	D3		
P5953	C2		
TG5101	A2		
TG5201	C2		
TG5401	D1		
TG5801	D3		
TP5001	B3		
TP5002	D2		
TP5101	A2		
TP5102	B2		
TP5201	D3		
TP5202	D2		
TP5203	E2		
TP5204	D3		
TP5401	D1		
TP5402	C1		
TP5403	C1		
TP5404	B2		

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC5001	B1	IC5602	D3	Q5001	D4	Q5204	E2	VR5401	E1
IC5101	D2	IC5603	C3	Q5002	B4	Q5401	C1	VR5402	D1
IC5102	D1	IC5701	B2	Q5003	D4	Q5402	C1	VR5403	D1
IC5201	D5	IC5702	C2	Q5004	A4	Q5403	C1	VR5404	D1
IC5202	D1	IC5703	C3	Q5005	A4	Q5404	D1	VR5406	C1
IC5203	E3	IC5704	C3	Q5006	B3	Q5601	B2	VR5407	D2
IC5204	E1	IC5801	D4	Q5007	B4	Q5602	B2	VR5408	C1
IC5205	D5	IC5802	C4	Q5008	A3	Q5603	C2	VR5409	C1
IC5206	D3	IC5803	D4	Q5009	B3	Q5606	B2	VR5411	C2
IC5207	B3	IC5805	B4	Q5010	B3	Q5607	C2	VR5801	B4
IC5208	B2	IC5806	B4	Q5011	E3	Q5608	B3		
IC5209	A2	IC5807	C4	Q5012	D1	QR5101	B2		
IC5210	A3	IC5808	C4	Q5101	E3	QR5401	B5		
IC5401	B4	IC5809	C4	Q5102	A3	QR5402	B5		
IC5402	B5	IC5810	C4	Q5103	D3	SW5801	B4		
IC5403	B5	IC5811	C5	Q5104	A3	TP5801	B3		
IC5404	B1	IC5901	C3	Q5105	B2	TP5802	B4		
IC5405	D1	IC5902	B4	Q5106	B3	VR5201	B1		
IC5406	B1	IC5903	C4	Q5107	D2	VR5202	A1		
IC5407	B1	IC5904	D4	Q5108	B2	VR5203	B1		
IC5408	C2	IC5951	B3	Q5109	E2	VR5204	B1		
IC5409	C1	IC5952	D3	Q5110	A2	VR5206	A1		
IC5410	C1	IC5953	A1	Q5201	D2	VR5207	B3		
IC5411	C2	IC5954	A4	Q5202	D2	VR5208	A1		
IC5601	D3	IC5959	A3	Q5203	D2	VR5209	A1		



(COMPONENT SIDE)



(FOIL SIDE)

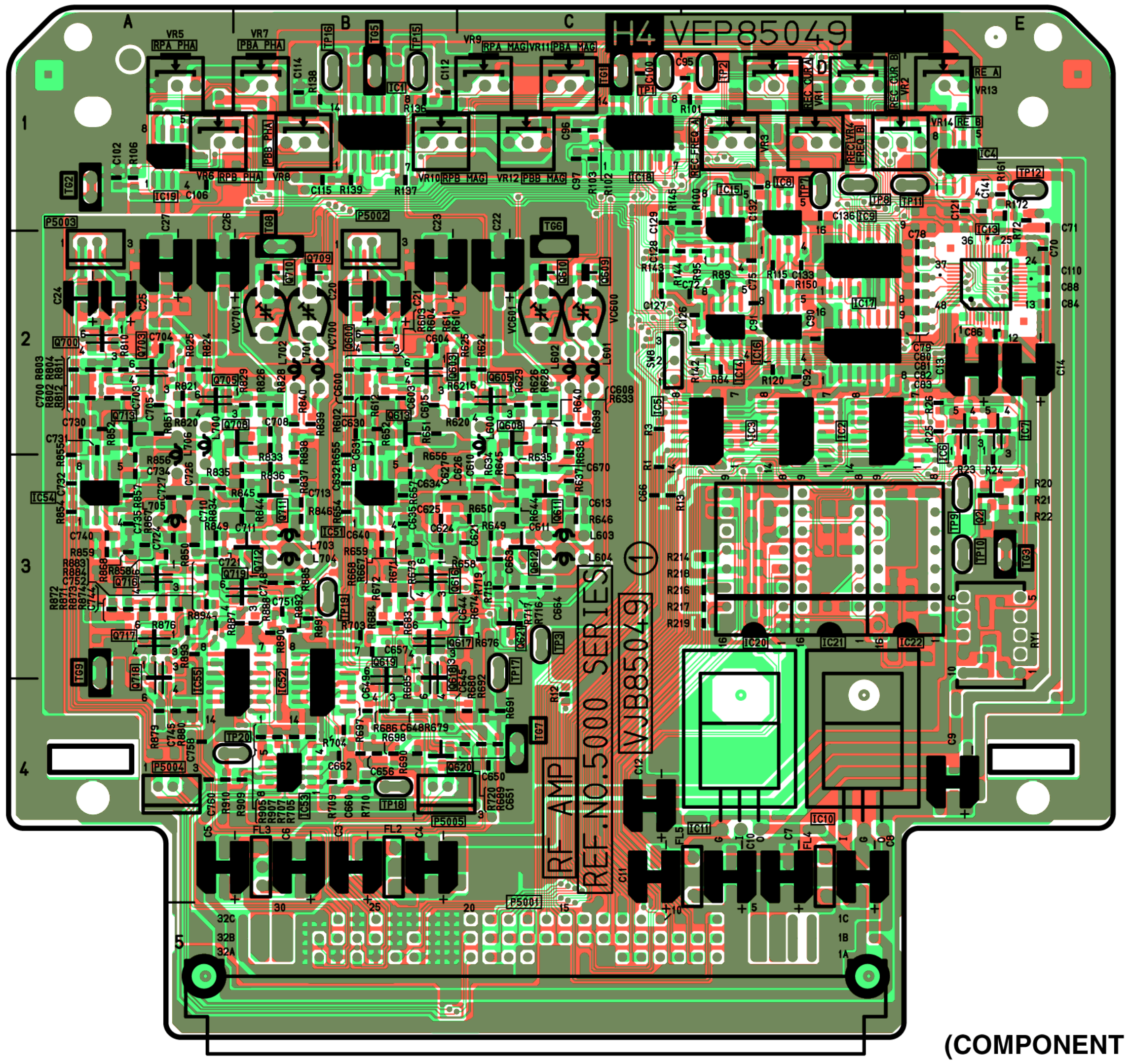
RF AMP P.C.BOARD(VEP85049A)

COMPONENT SIDE

REF	LOC	REF	LOC
IC5010	D4	TP5011	E1
IC5011	D4	TP5012	E1
IC5020	D3	TP5015	B1
IC5021	D3	TP5016	B1
IC5022	E3	TP5017	C3
P5001	C5	TP5018	B4
P5002	B2	TP5019	B3
P5003	A2	TP5020	A4
P5004	A4	VC5600	C2
P5005	B4	VC5601	C2
SW5008	C2	VC5700	B2
TG5001	C1	VC5701	B2
TG5002	A1	VR5001	D1
TG5003	E3	VR5002	D1
TG5005	B1	VR5003	D1
TG5006	C2	VR5004	D1
TG5007	C4	VR5005	A1
TG5008	B2	VR5006	A1
TG5009	A3	VR5007	B1
TP5001	C1	VR5008	B1
TP5002	D1	VR5009	C1
TP5003	C3	VR5010	B1
TP5007	D1	VR5011	C1
TP5008	D1	VR5012	C1
TP5009	E3	VR5013	E1
TP5010	E3	VR5014	D1

FOIL SIDE

REF	LOC	REF	LOC	REF	LOC
IC5001	D1	Q5007	D2	Q5702	A2
IC5002	B2	Q5008	E3	Q5703	E2
IC5003	B2	Q5600	D2	Q5704	A2
IC5004	A1	Q5601	B2	Q5705	E2
IC5005	B2	Q5602	B2	Q5706	B3
IC5006	A2	Q5603	D2	Q5707	B3
IC5007	A2	Q5604	B2	Q5708	D2
IC5008	B1	Q5605	C2	Q5709	D2
IC5009	B2	Q5606	C3	Q5710	D2
IC5012	A1	Q5607	C3	Q5711	D3
IC5013	A2	Q5608	C2	Q5712	D3
IC5014	B2	Q5609	C2	Q5713	E2
IC5015	B1	Q5610	C2	Q5714	A3
IC5016	B2	Q5611	C3	Q5715	A3
IC5017	B2	Q5612	C3	Q5716	E3
IC5018	C1	Q5613	D2	Q5717	E3
IC5019	E1	Q5614	B3	Q5718	E3
IC5051	D3	Q5615	B3	Q5719	D3
IC5052	D4	Q5616	D3	Q5720	B3
IC5053	D4	Q5617	D3		
IC5054	E3	Q5618	D3		
IC5055	D4	Q5619	D4		
Q5001	E3	Q5620	D4		
Q5002	A3	Q5621	C3		
Q5005	E2	Q5700	E2		
Q5006	D2	Q5701	A2		


A
B
C
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E
1
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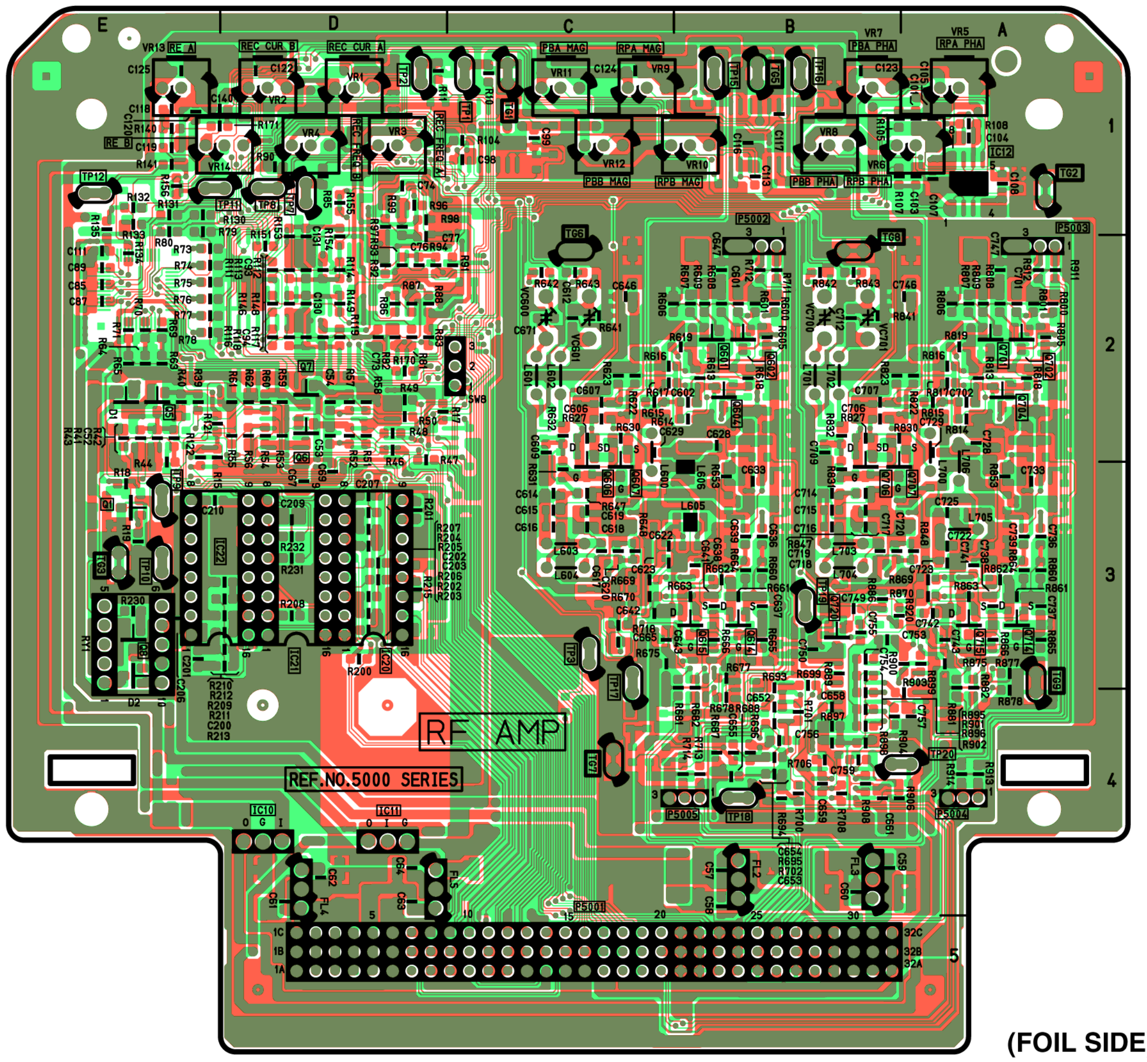
5
H4 VEP85049
RF AMP
REF.NO.5000 SERIES
VJB85049
P5001
P5002
P5003
P5004
P5005

(COMPONENT SIDE)

CBA-21


E
D
C
B
A
1
2
3
4
5
RF AMP
REF.NO.5000 SERIES
P5001
P5002
P5003
P5004
P5005

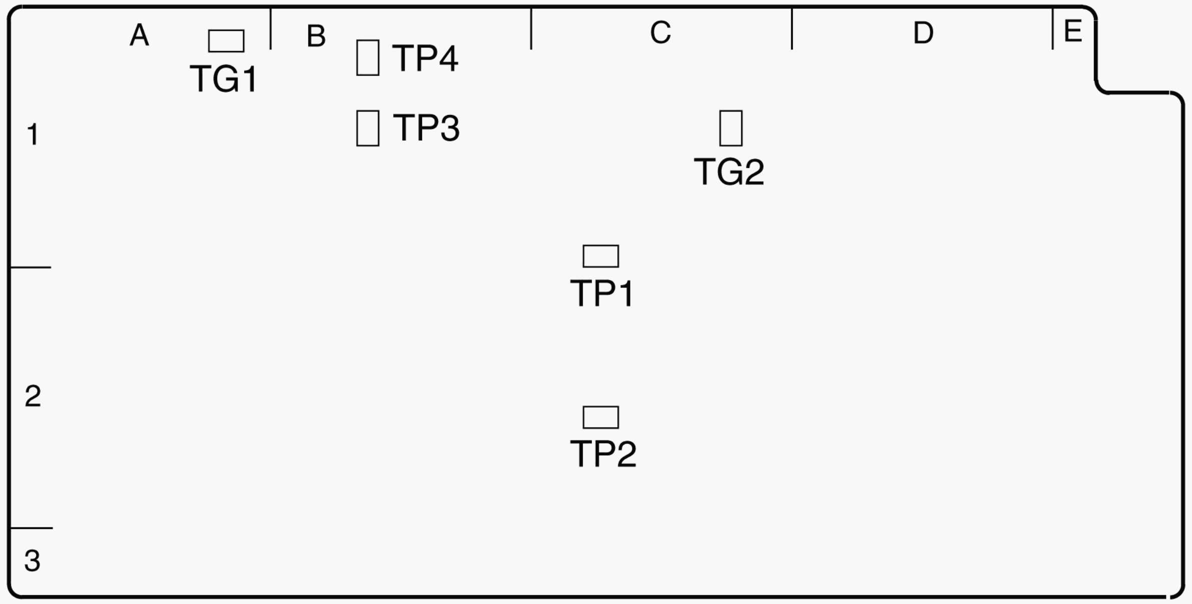
(FOIL SIDE)

CBA-21

HEAD BUFF P.C.BOARD (VEP85151A)

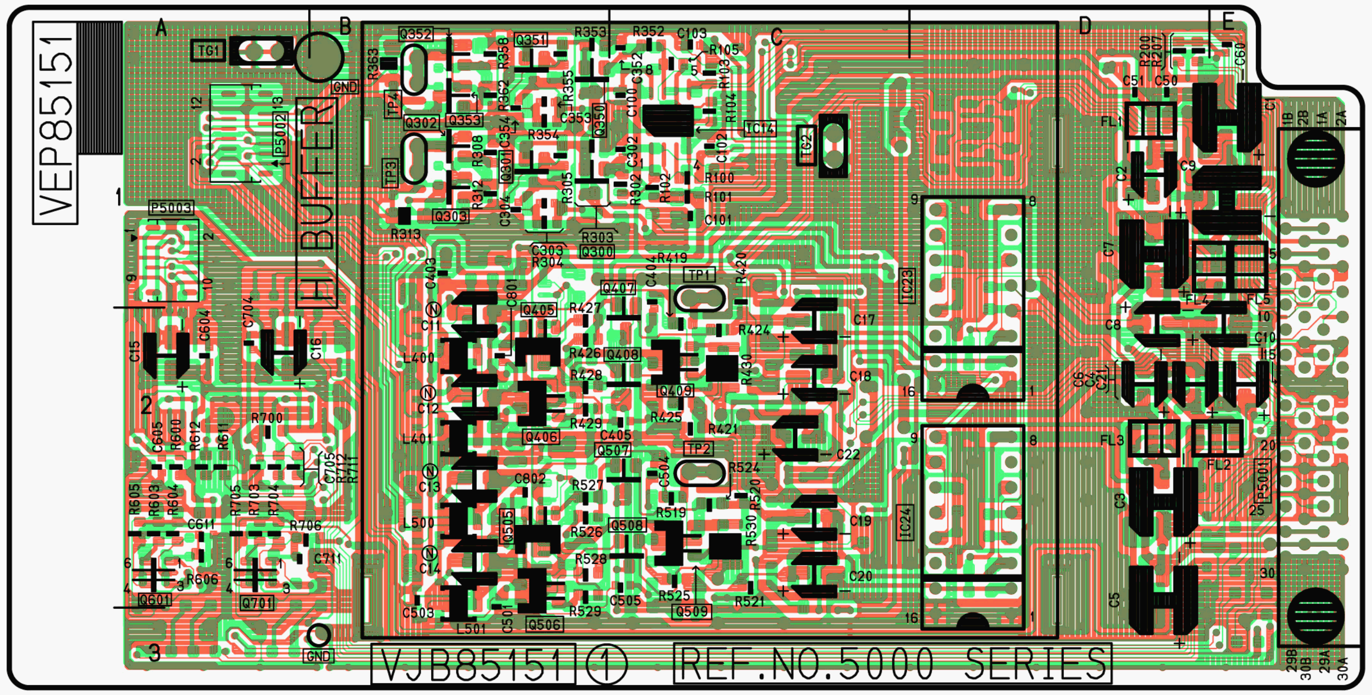
COMPONENT SIDE

REF	LOC
IC14	C1
IC23	D1
IC24	D2
P5001	E2
P5002	A1
P5003	A1
Q300	B1
Q301	B1
Q302	B1
Q303	B1
Q350	B1
Q351	B1
Q352	B1
Q353	B1
Q405	B2
Q406	B2
Q407	C2
Q408	C2
Q409	C2
Q505	B2
Q506	B2
Q507	C2
Q508	C2
Q509	C2
Q601	A2
Q701	A2
TG1	A1
TG2	C1
TP1	C1
TP2	C2


A
B
C
D
E
1
2
3
TG1
TP4
TP3
TG2
TP1
TP2

FOIL SIDE

REF	LOC	REF	LOC
TG1	A1	IC27	C1
IC50	A2	IC28	C1
IC90	A2	Q412	C2
Q600	A2	Q413	C2
Q700	A2	Q411	C2
TP3	B1	Q410	C2
TP4	B1	IC34	C2
IC25	B1	TP2	C2
IC26	B1	Q512	C2
IC30	B1	Q513	C2
Q401	B2	Q510	C2
Q402	B2	Q511	C2
Q403	B2	IC35	D1
Q404	B2	IC45	D1
Q501	B2	IC23	D1
Q502	B2	IC3	D1
Q504	B2	Q200	D1
IC31	B2	IC24	D2
IC32	B2	IC10	D2
IC33	B2	Q201	E1
IC40	B2	IC11	E2
IC41	B2	P5001	E2
IC42	B2		
IC43	B2		
Q400	B2		
Q500	B2		
IC9	C1		
IC8	C1		
TP1	C1		
TG2	C1		


VEP85151
H. BUFFER
VJB85151 ①
REF.NO.5000 SERIES
A
B
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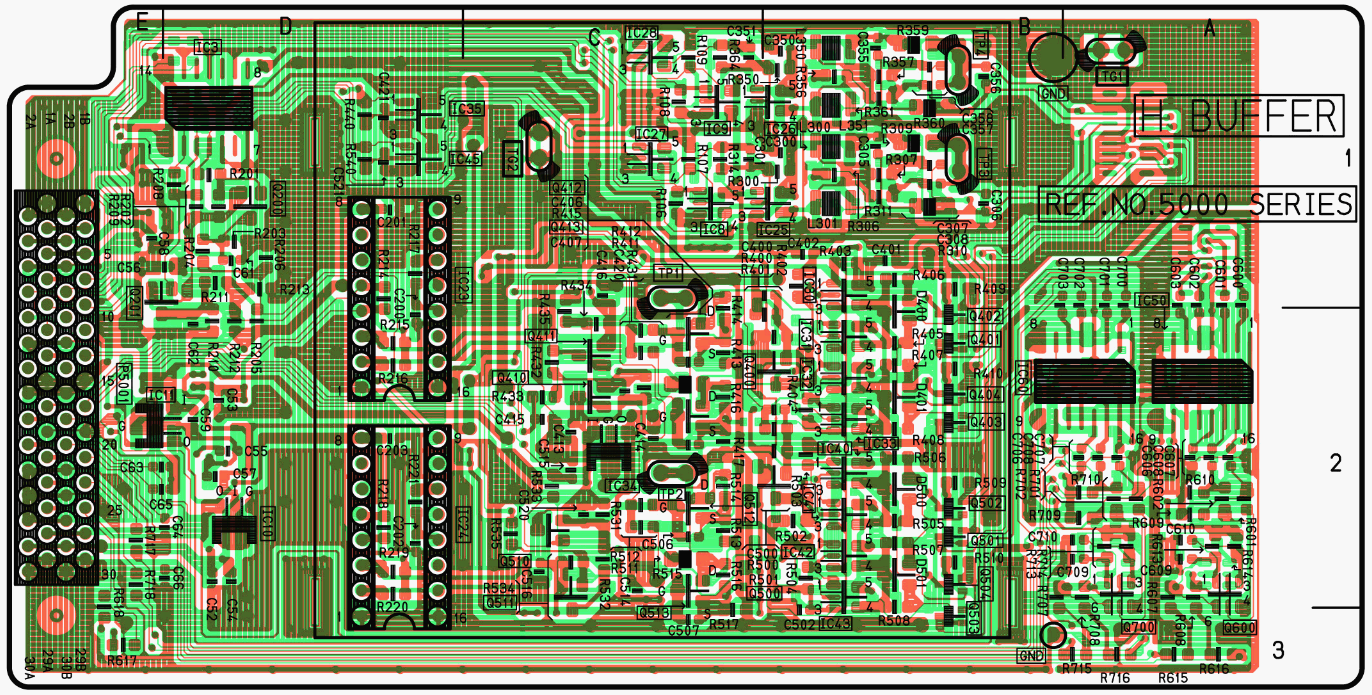
3

(COMPONENT SIDE)


H. BUFFER
REF.NO.5000 SERIES
E
D
C
B
A
1
2
3

(FOIL SIDE)

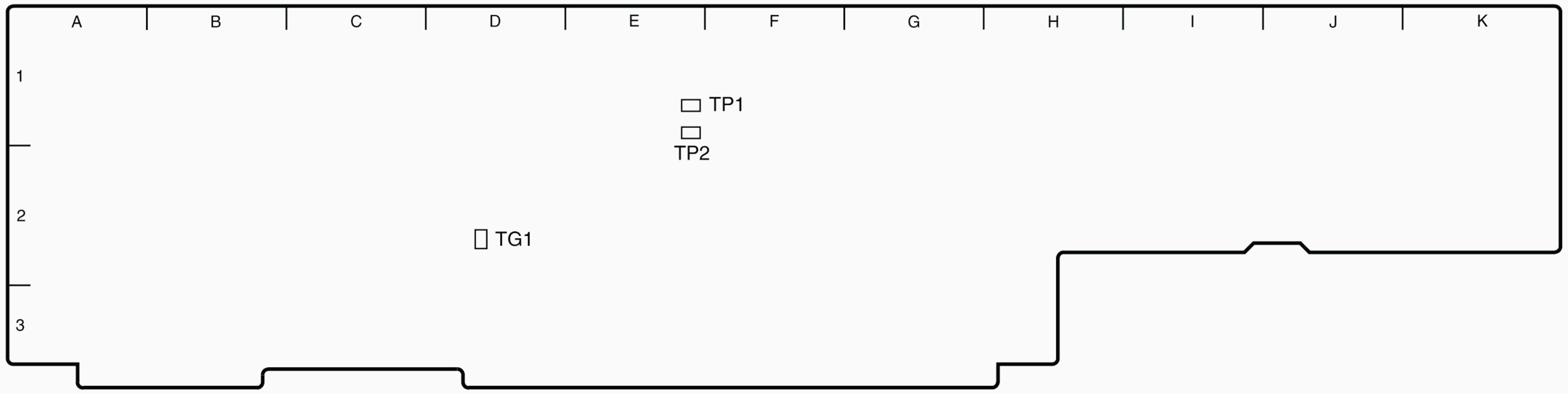
CBA-23

CBA-23

FRONT CPU P.C.BOARD (VEP86263B)

COMPONENT SIDE

REF	LOC	REF	LOC
IC1	D2	IC33	G2
IC2	B2	IC34	G3
IC3	D1	IC35	G3
IC4	E2	IC36	G3
IC5	F1	IC37	H3
IC6	F1	IC38	E3
IC13	F1	IC39	F3
IC14	A1	IC40	F3
IC15	B2	IC41	G3
IC16	C1	P1	I1
IC17	H1	P2	J1
IC18	B1	P3	H2
IC23	A3	P4	J2
IC24	B3	P5	K1
IC25	B2	P6	E1
IC27	G2	P7	C2
IC28	B2	P8	A3
IC29	A2	SW1	C1
IC30	G2	TG1	D2
IC31	F2	TP1	E1
IC32	H2	TP2	E1


A
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G
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I
J
K
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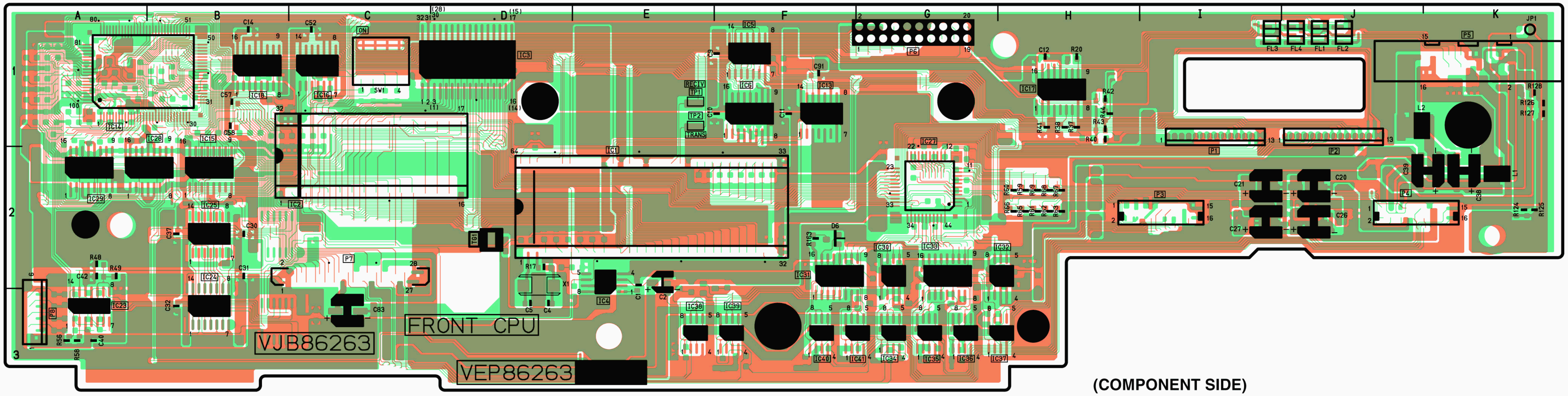
TP1
TP2
TG1


A
B
C
D
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F
G
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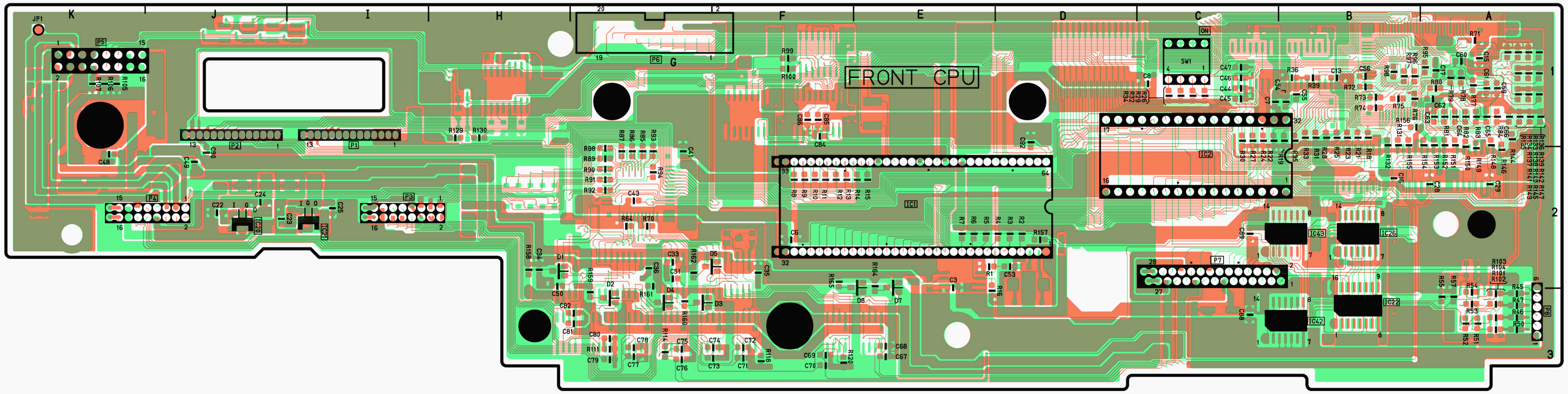
I
J
K
1
2
3
FRONT CPU
VJB86263
VEP86263
IC1
IC2
IC3
IC4
IC5
IC6
IC13
IC14
IC15
IC16
IC17
IC23
IC24
IC25
IC27
IC28
IC29
IC30
IC31
IC32
IC33
IC34
IC35
IC36
IC37
IC38
IC39
IC40
IC41
P1
P2
P3
P4
P5
P6
P7
P8
SW1
TG1
TP1
TP2
X1
L1
L2
D6
FL1
FL2
FL3
FL4
JP1

(COMPONENT SIDE)

FRONT CPU P.C.BOARD (VEP86263B)

FOIL SIDE

REF	LOC
IC20	J2
IC21	I2
IC22	B3
IC26	B2
IC42	B3
IC43	B2



K
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A
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JP1
P5
P1
P2
P3
P4
P6
P7
P8
FRONT CPU
IC1
IC2
IC22
IC26
IC42
IC43
SW1

(FOIL SIOE)

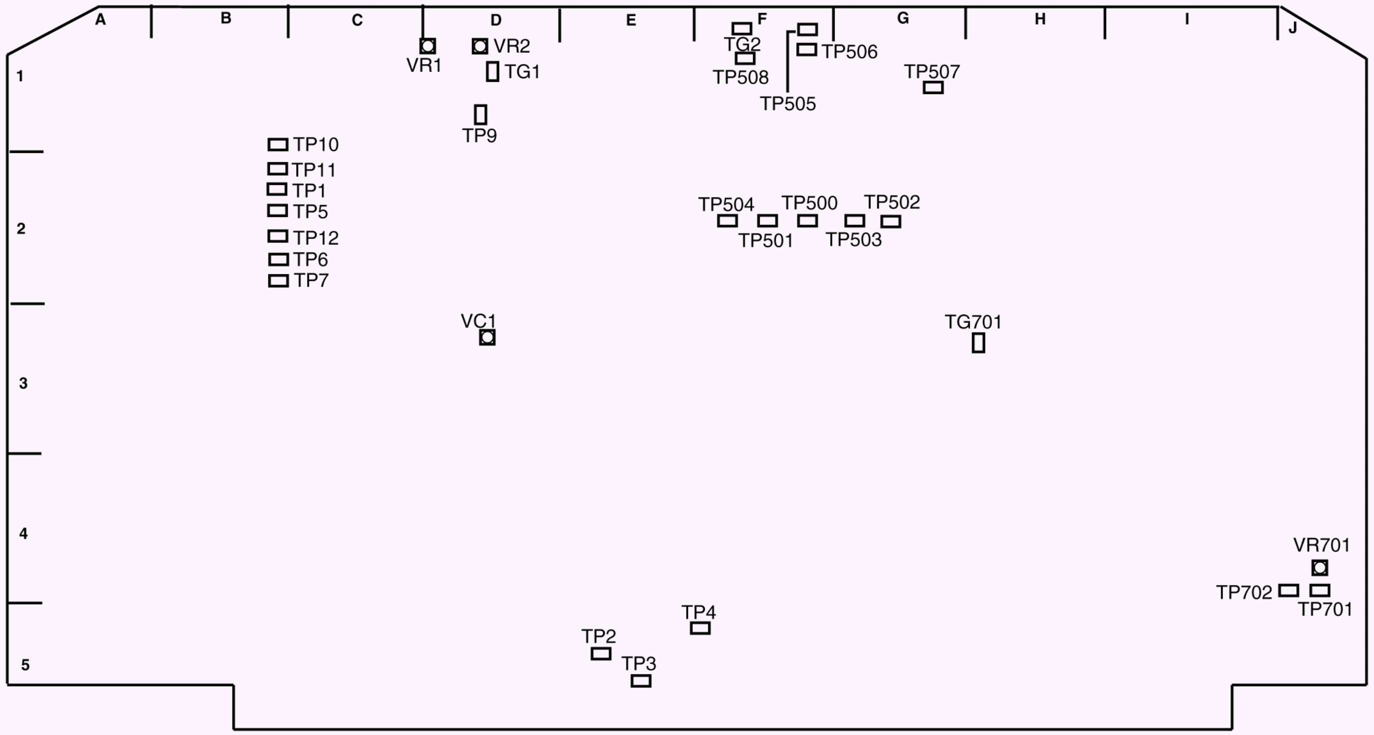
CBA-27

CBA-27

SYSCON P.C.BOARD (NTSC:VEP86267A,PAL:VEP86267B)

COMPONENT SIDE

REF	LOC	REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC1	C2	IC524	E1	Q13	C4	QR32	B4	TP701	J4
IC2	A3	IC525	G1	Q14	B4	QR39	A4	TP702	J4
IC6	C3	IC527	F3	Q15	B4	QR40	A4	VC1	D3
IC8	D1	IC701	H3	Q16	B4	SW501	G1	VR1	D1
IC9	C1	IC702	H2	Q17	B4	TG1	D1	VR2	D1
IC13	D2	IC703	I1	Q18	B4	TG2	F1	VR701	J4
IC15	E3	IC704	H2	Q19	B4	TG701	H3		
IC17	A2	IC710	I3	Q20	B4	TP1	B2		
IC23	E4	IC714	G4	Q21	B4	TP2	E4		
IC24	D2	IC716	F4	Q23	D4	TP3	E5		
IC26	B1	IC717	G4	Q24	C4	TP4	F4		
IC27	A5	IC719	J4	Q27	D4	TP5	B2		
IC28	A3	IC720	J4	Q28	C4	TP6	B2		
IC29	B1	IC721	I3	Q30	A4	TP7	B2		
IC35	C1	IC722	I4	Q31	A4	TP8	C1		
IC500	E2	IC725	H4	Q32	A4	TP9	D1		
IC503	E3	IC726	H4	Q33	A4	TP10	B1		
IC504	E2	IC731	H2	Q34	A4	TP11	B2		
IC505	E1	IC733	H4	Q35	A4	TP12	B2		
IC509	G2	P1	G5	Q36	A4	TP13	D1		
IC510	G3	P2	D5	Q37	A4	TP14	C1		
IC511	F3	P701	I1	Q39	D4	TP500	F2		
IC512	F4	Q4	E3	Q703	H3	TP501	F2		
IC513	G3	Q6	C4	QR13	C1	TP502	G2		
IC514	G3	Q7	C4	QR14	C1	TP503	G2		
IC515	G4	Q8	B4	QR15	C1	TP504	F2		
IC516	G4	Q9	C4	QR16	B1	TP505	F1		
IC517	F1	Q10	C4	QR27	C4	TP506	F1		
IC518	H1	Q11	C4	QR28	C4	TP507	G1		
IC523	F1	Q12	B4	QR31	B4	TP508	F1		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VR1
VR2
TG1
TP9
TG2
TP508
TP506
TP505
TP507
TP10
TP11
TP1
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TP12
TP6
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TP501
TP503
VC1
TG701
VR701
TP702
TP701
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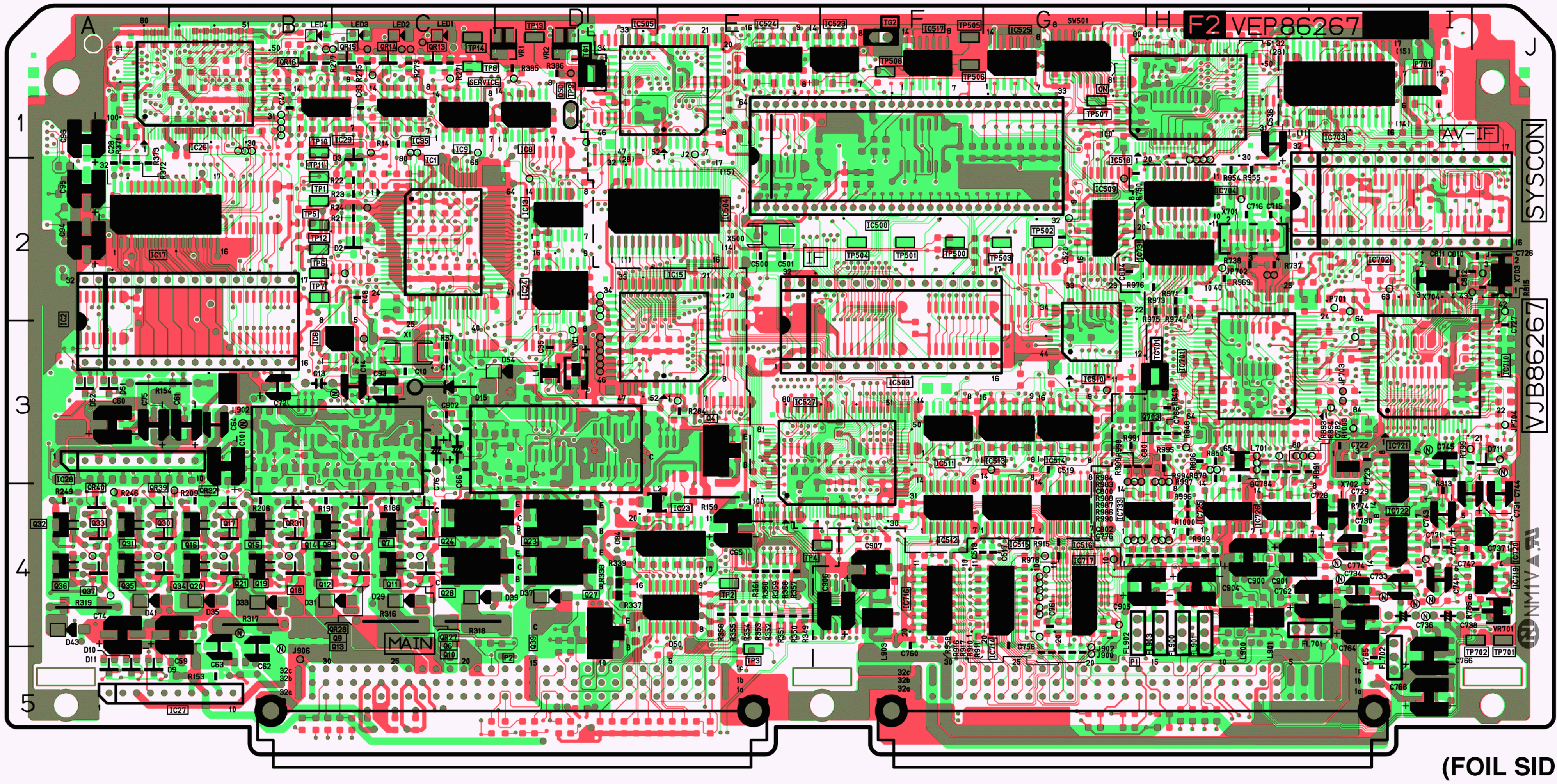
TP2
TP3


A
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F2
VEP86267
SYSCON
VJB86267
AV-IF
IF
MAIN
SERVICE
LED4
LED3
LED2
LED1
SW501

(FOIL SIDE)

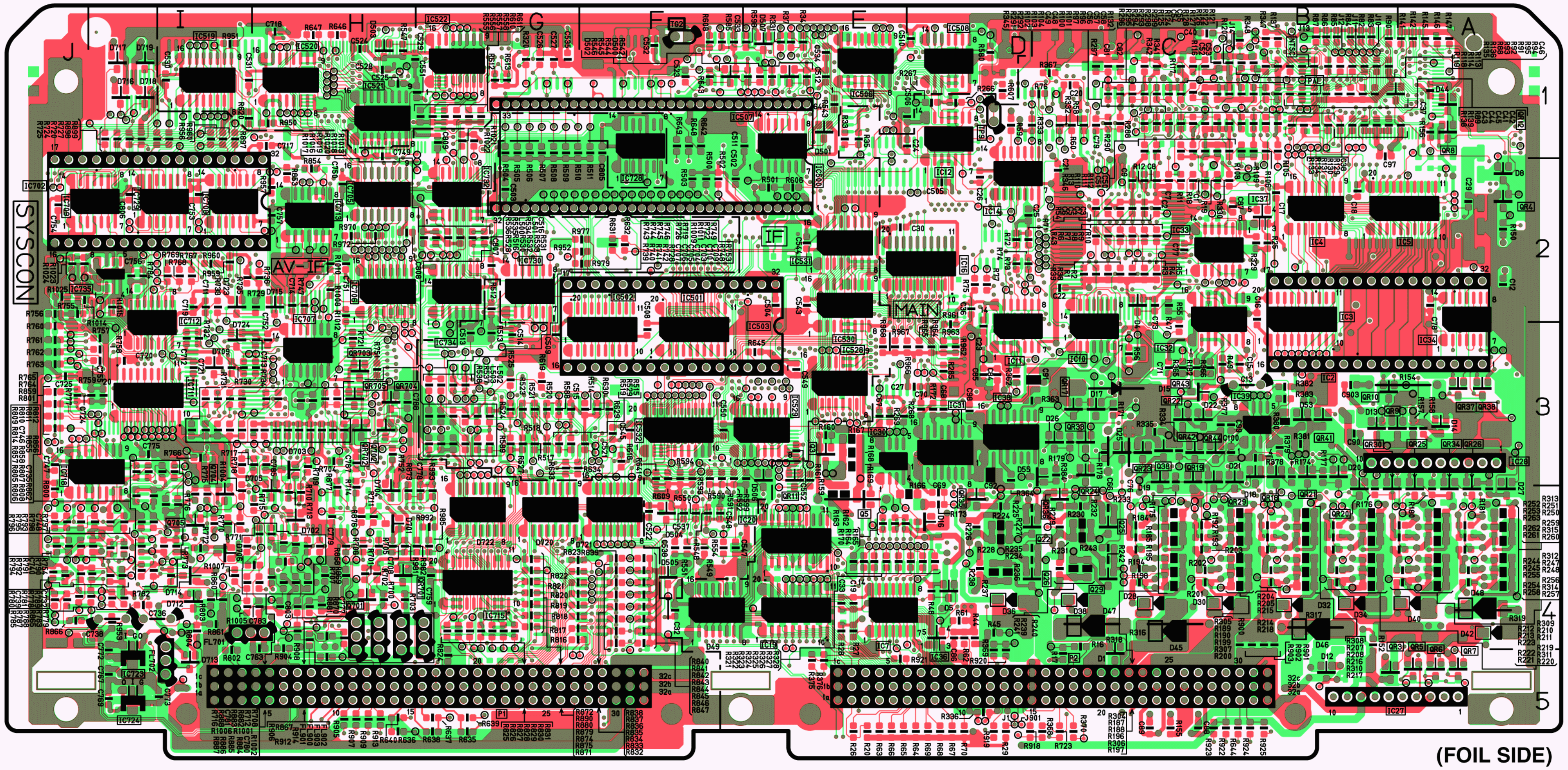
CBA-4

CBA-4

SYSCON P.C.BOARD (NTSC:VEP86267A,PAL:VEP86267B)

FOIL SIDE

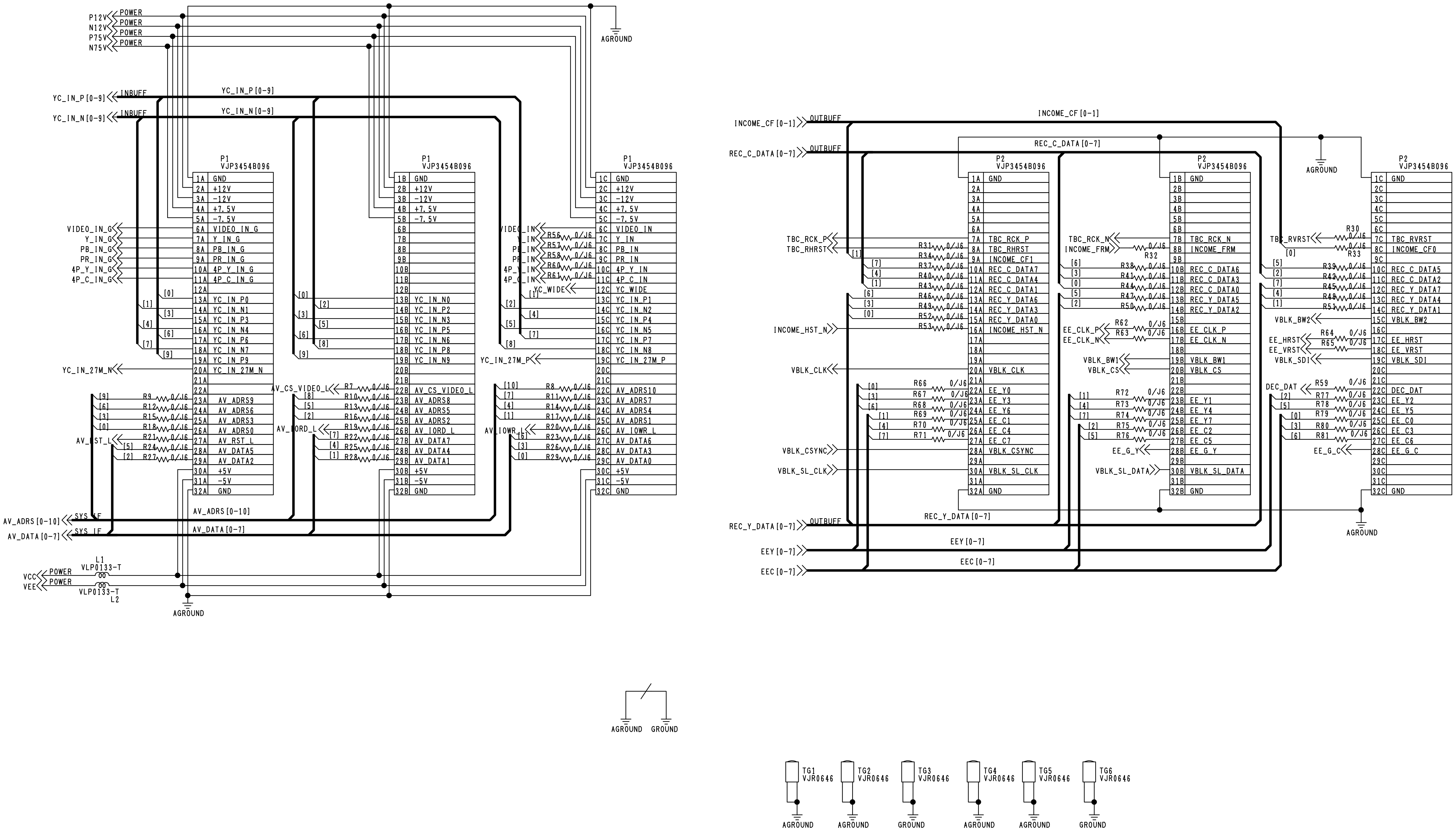
REF	LOC	REF	LOC	REF	LOC	REF	LOC
IC3	B2	IC529	E2	Q702	H2	QR38	A2
IC4	B1	IC530	E2	Q704	I3	QR41	B2
IC5	A1	IC531	E1	Q705	I3	QR42	C3
IC7	E4	IC532	F2	QR3	B5	QR43	C2
IC10	C2	IC705	H1	QR4	A1	QR44	C3
IC11	D2	IC706	H2	QR5	A5	QR701	H3
IC12	D1	IC707	H2	QR6	A5	QR702	H2
IC14	D1	IC708	I1	QR7	A5	QR703	H2
IC16	D1	IC709	I1	QR8	A1	QR704	H2
IC19	E4	IC711	I2	QR9	B2	QR705	H2
IC20	E3	IC712	I2	QR10	B2		
IC30	E3	IC713	H1	QR11	E3		
IC31	D3	IC715	G3	QR12	B1		
IC32	C2	IC718	I3	QR17	C2		
IC33	C1	IC723	I5	QR18	B3		
IC34	A2	IC724	I5	QR19	C3		
IC36	D4	IC728	F1	QR20	B3		
IC37	B1	IC729	I1	QR21	B3		
IC38	D3	IC730	G2	QR22	C2		
IC39	B2	IC732	G1	QR23	C3		
IC501	F2	IC734	G2	QR24	C3		
IC502	F2	IC735	I2	QR25	A3		
IC506	E1	Q3	E3	QR26	A3		
IC507	E1	Q5	E3	QR29	C3		
IC508	D1	Q22	D3	QR30	B3		
IC519	I1	Q25	C3	QR33	C3		
IC520	H1	Q26	D3	QR34	A3		
IC521	H1	Q29	C3	QR35	D3		
IC522	G1	Q38	C3	QR36	C3		
IC528	E2	Q701	H4	QR37	A2		



(FOIL SIDE)

CBA-5

CBA-5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P75V
N75V
POWER
AGROUND
GROUND
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YC_IN_N[0-9]
INBUFF
P1
VJP3454B096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A VIDEO_IN_G
7A Y_IN_G
8A PB_IN_G
9A PR_IN_G
10A 4P_Y_IN_G
11A 4P_C_IN_G
13A YC_IN_P0
14A YC_IN_N1
15A YC_IN_P3
16A YC_IN_N4
17A YC_IN_P6
18A YC_IN_N7
19A YC_IN_P9
20A YC_IN_27M_N
23A AV_ADRS9
24A AV_ADRS6
25A AV_ADRS3
26A AV_ADRS0
27A AV_RST_L
28A AV_DATA5
29A AV_DATA2
30A +5V
31A -5V
32A GND
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
13B YC_IN_N0
14B YC_IN_P2
15B YC_IN_N3
16B YC_IN_P5
17B YC_IN_N6
18B YC_IN_P8
19B YC_IN_N9
22B AV_CS_VIDEO_L
23B AV_ADRS8
24B AV_ADRS5
25B AV_ADRS2
26B AV_IORD_L
27B AV_DATA7
28B AV_DATA4
29B AV_DATA1
30B +5V
31B -5V
32B GND
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C VIDEO_IN
7C Y_IN
8C PB_IN
9C PR_IN
10C 4P_Y_IN
11C 4P_C_IN
12C YC_WIDE
13C YC_IN_P1
14C YC_IN_N2
15C YC_IN_P4
16C YC_IN_N5
17C YC_IN_P7
18C YC_IN_N8
19C YC_IN_27M_P
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23C AV_ADRS7
24C AV_ADRS4
25C AV_ADRS1
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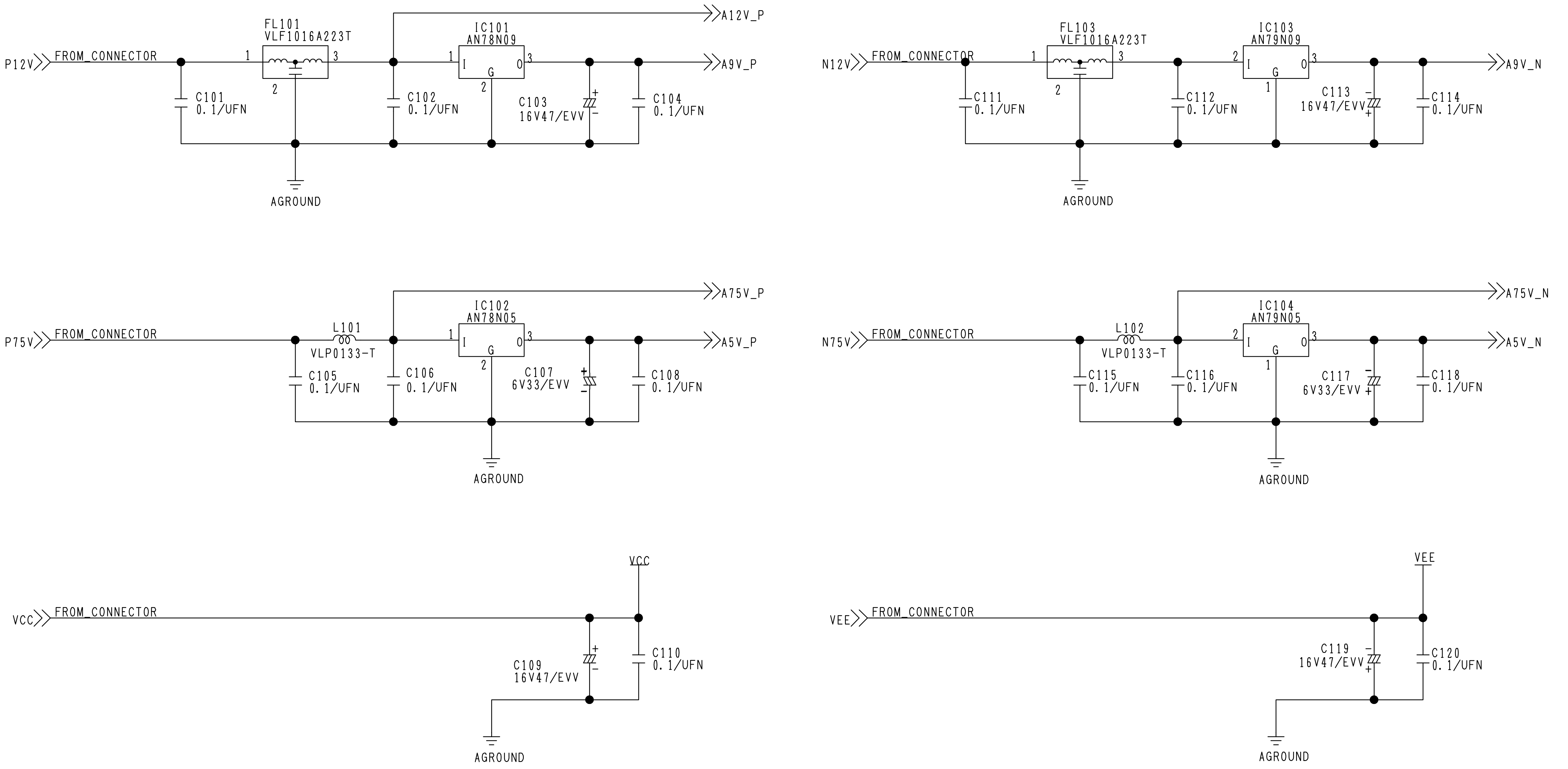
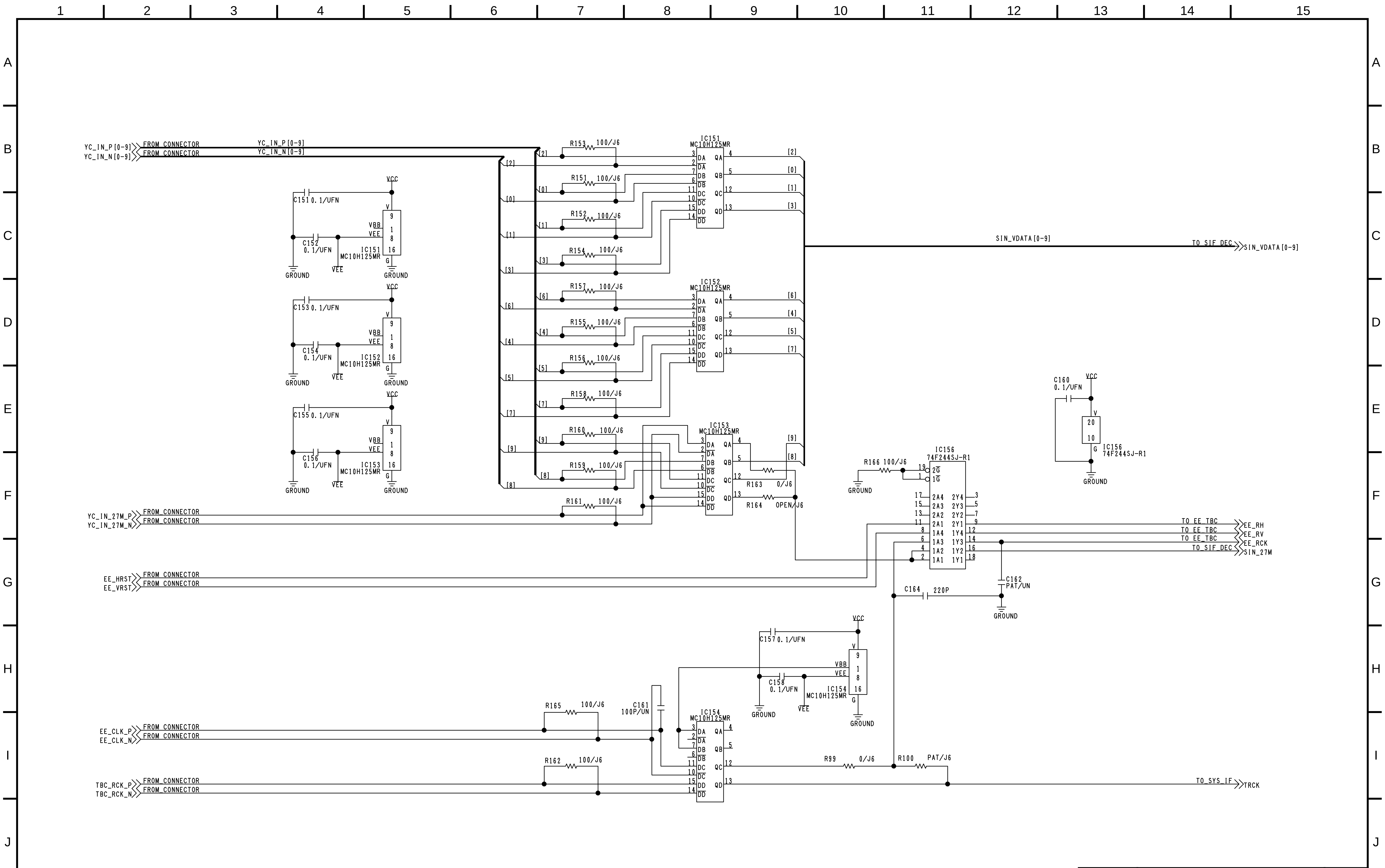
27C AV_DATA6
28C AV_DATA3
29C AV_DATA0
30C +5V
31C -5V
32C GND
VIDEO_IN_G
Y_IN_G
PB_IN_G
PR_IN_G
4P_Y_IN_G
4P_C_IN_G
VIDEO_IN
Y_IN
PB_IN
PR_IN
4P_Y_IN
4P_C_IN
YC_WIDE
YC_IN_27M_N
YC_IN_27M_P
AV_CS_VIDEO_L
AV_IORD_L
AV_IOWR_L
AV_RST_L
AV_ADRS[0-10]
AV_DATA[0-7]
SYS_IF
R56 R57 R58 R60 R61 0/J6
R7 R8 R9 R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R24 R25 R26 R27 R28 R29 0/J6
L1
VLP0133-T
L2
VCC
VEE
INCOME_CF[0-1]
REC_C_DATA[0-7]
REC_Y_DATA[0-7]
OUTBUFF
EEY[0-7]
EEC[0-7]
P2
VJP3454B096
1A GND
7A TBC_RCK_P
8A TBC_RHRST
9A INCOME_CF1
10A REC_C_DATA7
11A REC_C_DATA4
12A REC_C_DATA1
13A REC_Y_DATA6
14A REC_Y_DATA3
15A REC_Y_DATA0
16A INCOME_HST_N
20A VBLK_CLK
22A EE_Y0
23A EE_Y3
24A EE_Y6
25A EE_C1
26A EE_C4
27A EE_C7
28A VBLK_CSYNC
30A VBLK_SL_CLK
32A GND
1B GND
7B TBC_RCK_N
8B INCOME_FRM
10B REC_C_DATA6
11B REC_C_DATA3
12B REC_C_DATA0
13B REC_Y_DATA5
14B REC_Y_DATA2
16B EE_CLK_P
17B EE_CLK_N
19B VBLK_BW1
20B VBLK_CS
23B EE_Y1
24B EE_Y4
25B EE_Y7
26B EE_C2
27B EE_C5
28B EE_G_Y
30B VBLK_SL_DATA
32B GND
1C GND
7C TBC_RVRST
8C INCOME_CF0
10C REC_C_DATA5
11C REC_C_DATA2
12C REC_Y_DATA7
13C REC_Y_DATA4
14C REC_Y_DATA1
15C VBLK_BW2
17C EE_HRST
18C EE_VRST
19C VBLK_SDI
22C DEC_DAT
23C EE_Y2
24C EE_Y5
25C EE_C0
26C EE_C3
27C EE_C6
28C EE_G_C
32C GND
TBC_RCK_P
TBC_RHRST
INCOME_HST_N
VBLK_CLK
VBLK_CSYNC
VBLK_SL_CLK
TBC_RCK_N
INCOME_FRM
EE_CLK_P
EE_CLK_N
VBLK_BW1
VBLK_CS
EE_G_Y
VBLK_SL_DATA
TBC_RVRST
VBLK_BW2
EE_HRST
EE_VRST
VBLK_SDI
DEC_DAT
EE_G_C
R30 R31 R32 R33 R34 R37 R38 R39 R40 R41 R42 R43 R44 R45 R46 R47 R48 R49 R50 R51 R52 R53 0/J6
R59 R62 R63 R64 R65 R66 R67 R68 R69 R70 R71 R72 R73 R74 R75 R76 R77 R78 R79 R80 R81 0/J6
TG1 VJR0646
TG2 VJR0646
TG3 VJR0646
TG4 VJR0646
TG5 VJR0646
TG6 VJR0646

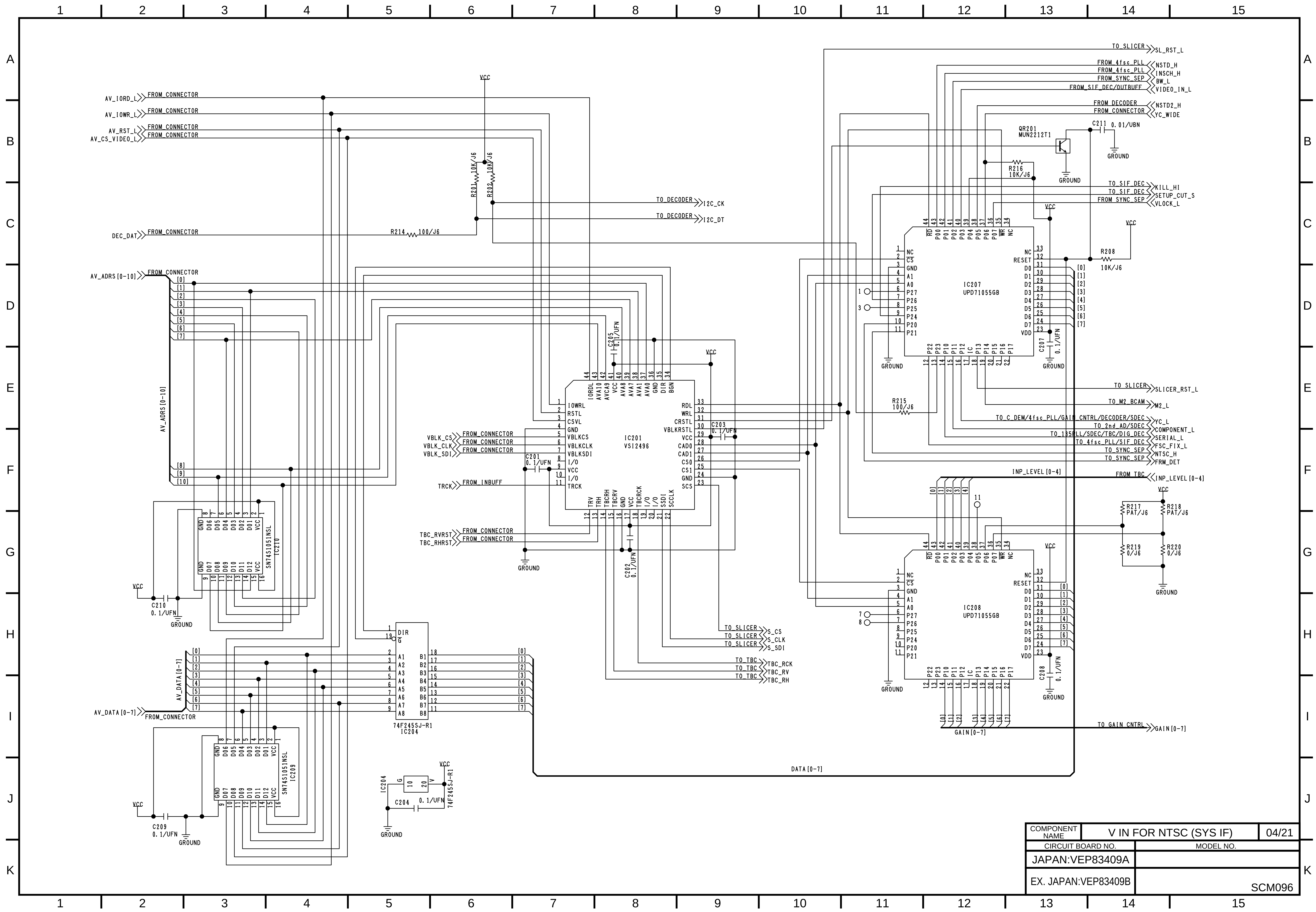
COMPONENT NAME	V IN FOR NTSC (CONNECTOR)	01/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM093	


P12V
FROM_CONNECTOR
FL101
VLF1016A223T
1
2
3
C101
0.1/UFN
A12V_P
IC101
AN78N09
I
G
O
1
2
3
C102
0.1/UFN
C103
16V47/EVV
C104
0.1/UFN
A9V_P
AGROUND
N12V
FROM_CONNECTOR
FL103
VLF1016A223T
C111
0.1/UFN
IC103
AN79N09
C112
0.1/UFN
C113
16V47/EVV
C114
0.1/UFN
A9V_N
AGROUND
P75V
FROM_CONNECTOR
L101
VLP0133-T
A75V_P
IC102
AN78N05
C105
0.1/UFN
C106
0.1/UFN
C107
6V33/EVV
C108
0.1/UFN
A5V_P
AGROUND
N75V
FROM_CONNECTOR
L102
VLP0133-T
A75V_N
IC104
AN79N05
C115
0.1/UFN
C116
0.1/UFN
C117
6V33/EVV
C118
0.1/UFN
A5V_N
AGROUND
VCC
FROM_CONNECTOR
VCC
C109
16V47/EVV
C110
0.1/UFN
AGROUND
VEE
FROM_CONNECTOR
VEE
C119
16V47/EVV
C120
0.1/UFN
AGROUND

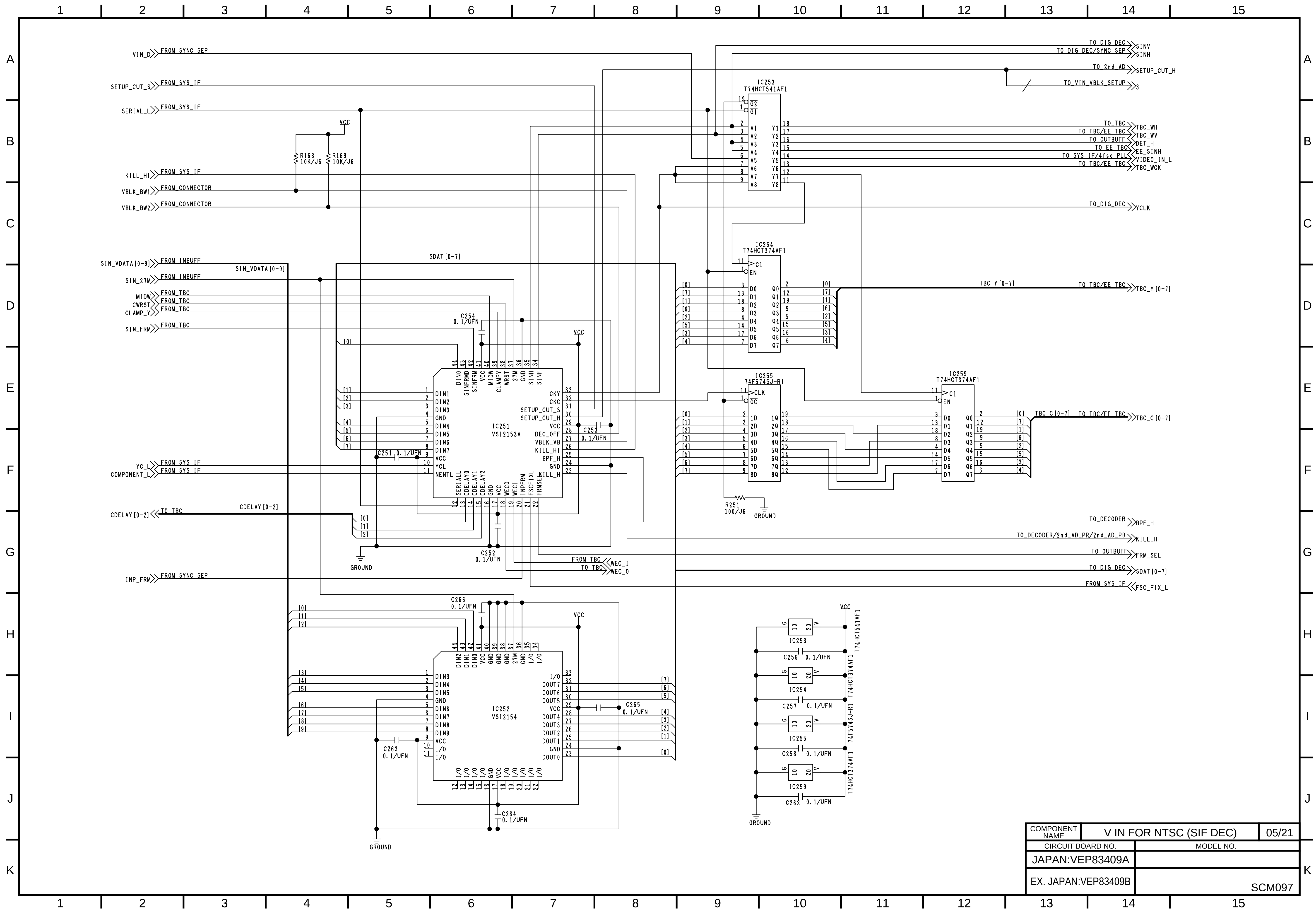
COMPONENT NAME	V IN FOR NTSC (POWER)	02/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM094	


YC_IN_P[0-9]
YC_IN_N[0-9]
FROM CONNECTOR
IC151 MC10H125MR
IC152 MC10H125MR
IC153 MC10H125MR
IC154 MC10H125MR
IC156 74F244SJ-R1
R153 100/J6
R151 100/J6
R152 100/J6
R154 100/J6
R157 100/J6
R155 100/J6
R156 100/J6
R158 100/J6
R160 100/J6
R159 100/J6
R161 100/J6
R163 0/J6
R164 OPEN/J6
R165 100/J6
R162 100/J6
R166 100/J6
R99 0/J6
R100 PAT/J6
C151 0.1/UFN
C152 0.1/UFN
C153 0.1/UFN
C154 0.1/UFN
C155 0.1/UFN
C156 0.1/UFN
C157 0.1/UFN
C158 0.1/UFN
C160 0.1/UFN
C161 100P/UN
C162 PAT/UN
C164 220P
VCC
VBB
VEE
GROUND
SIN_VDATA[0-9]
TO SIF DEC
YC_IN_27M_P
YC_IN_27M_N
EE_HRST
EE_VRST
TO EE TBC
EE_RH
EE_RV
EE_RCK
SIN_27M
EE_CLK_P
EE_CLK_N
TBC_RCK_P
TBC_RCK_N
TO SYS IF
TRCK

COMPONENT NAME	V IN FOR NTSC (IN BUFF)	03/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM095	

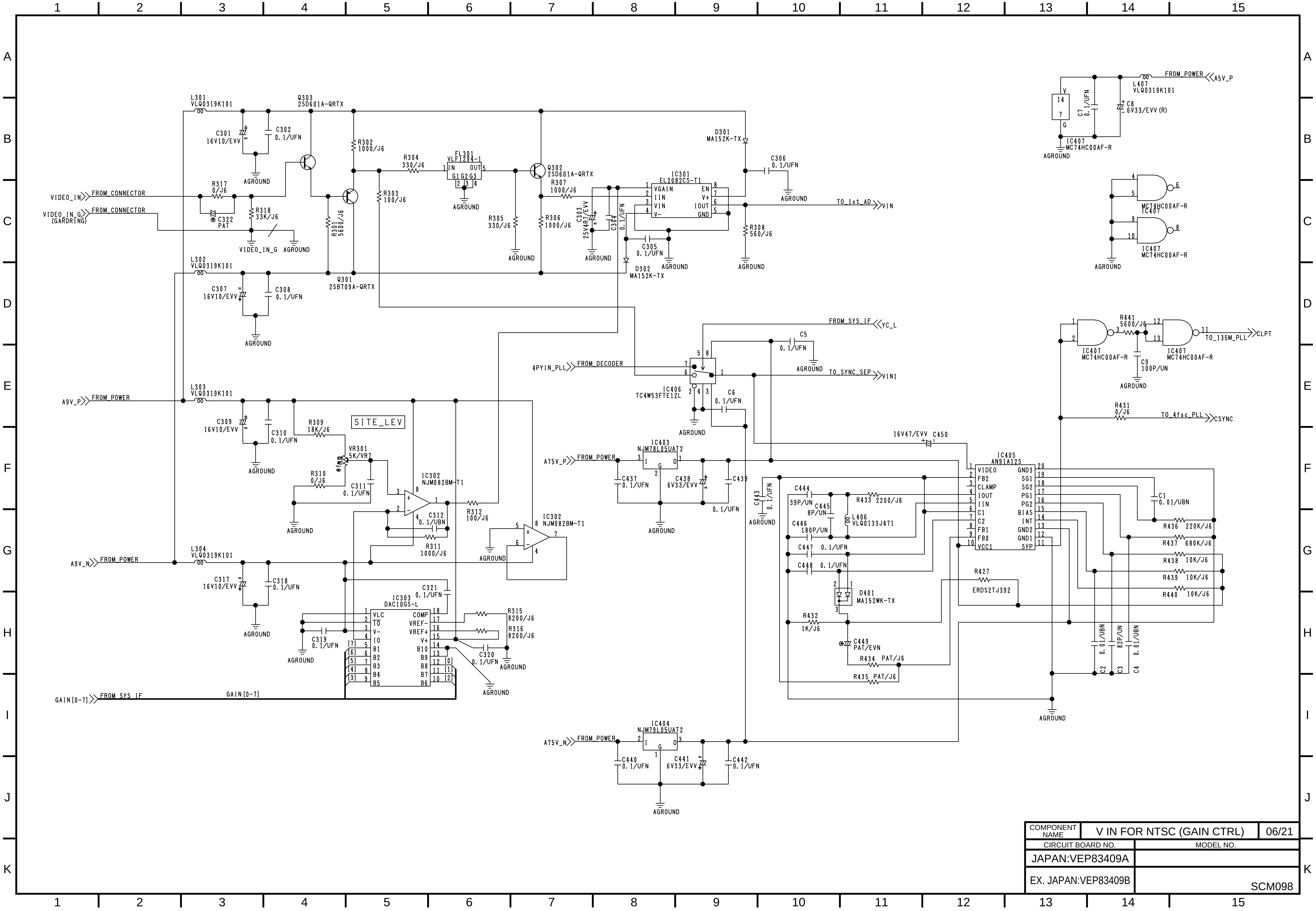

AV_IORD_L
AV_IOWR_L
AV_RST_L
AV_CS_VIDEO_L
FROM CONNECTOR
DEC_DAT
AV_ADRS[0-10]
AV_DATA[0-7]
VBLK_CS
VBLK_CLK
VBLK_SDI
TRCK
FROM INBUFF
TBC_RVRST
TBC_RHRST
VCC
GROUND
R201 10K/J6
R202 10K/J6
R214 100/J6
TO DECODER
I2C_CK
I2C_DT
IC201
VSI2496
C201 0.1/UFN
C202 0.1/UFN
C203 0.1/UFN
C205 0.1/UFN
IC210
SN74S1051NSL
C210 0.1/UFN
IC209
SN74S1051NSL
C209 0.1/UFN
IC204
74F245SJ-R1
C204 0.1/UFN
TO SLICER
S_CS
S_CLK
S_SDI
TO TBC
TBC_RCK
TBC_RV
TBC_RH
DATA[0-7]
IC207
UPD71055GB
IC208
UPD71055GB
C207 0.1/UFN
C208 0.1/UFN
QR201
MUN2212T1
C211 0.01/UBN
R216 10K/J6
R208 10K/J6
R215 100/J6
R217 PAT/J6
R218 PAT/J6
R219 0/J6
R220 0/J6
SL_RST_L
FROM 4fsc PLL
NSTD_H
INSCH_H
FROM SYNC SEP
BW_L
FROM SIF DEC/OUTBUFF
VIDEO_IN_L
FROM DECODER
NSTD2_H
YC_WIDE
TO SIF DEC
KILL_HI
SETUP_CUT_S
VLOCK_L
SLICER_RST_L
TO M2 BCAM
M2_L
TO C DEM/4fsc PLL/GAIN CNTRL/DECODER/SDEC
YC_L
TO 2nd AD/SDEC
COMPONENT_L
TO 135PLL/SDEC/TBC/DIG DEC
SERIAL_L
TO 4fsc PLL/SIF DEC
FSC_FIX_L
NTSC_H
FRM_DET
INP_LEVEL[0-4]
FROM TBC
TO GAIN CNTRL
GAIN[0-7]

COMPONENT NAME	V IN FOR NTSC (SYS IF)	04/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM096	

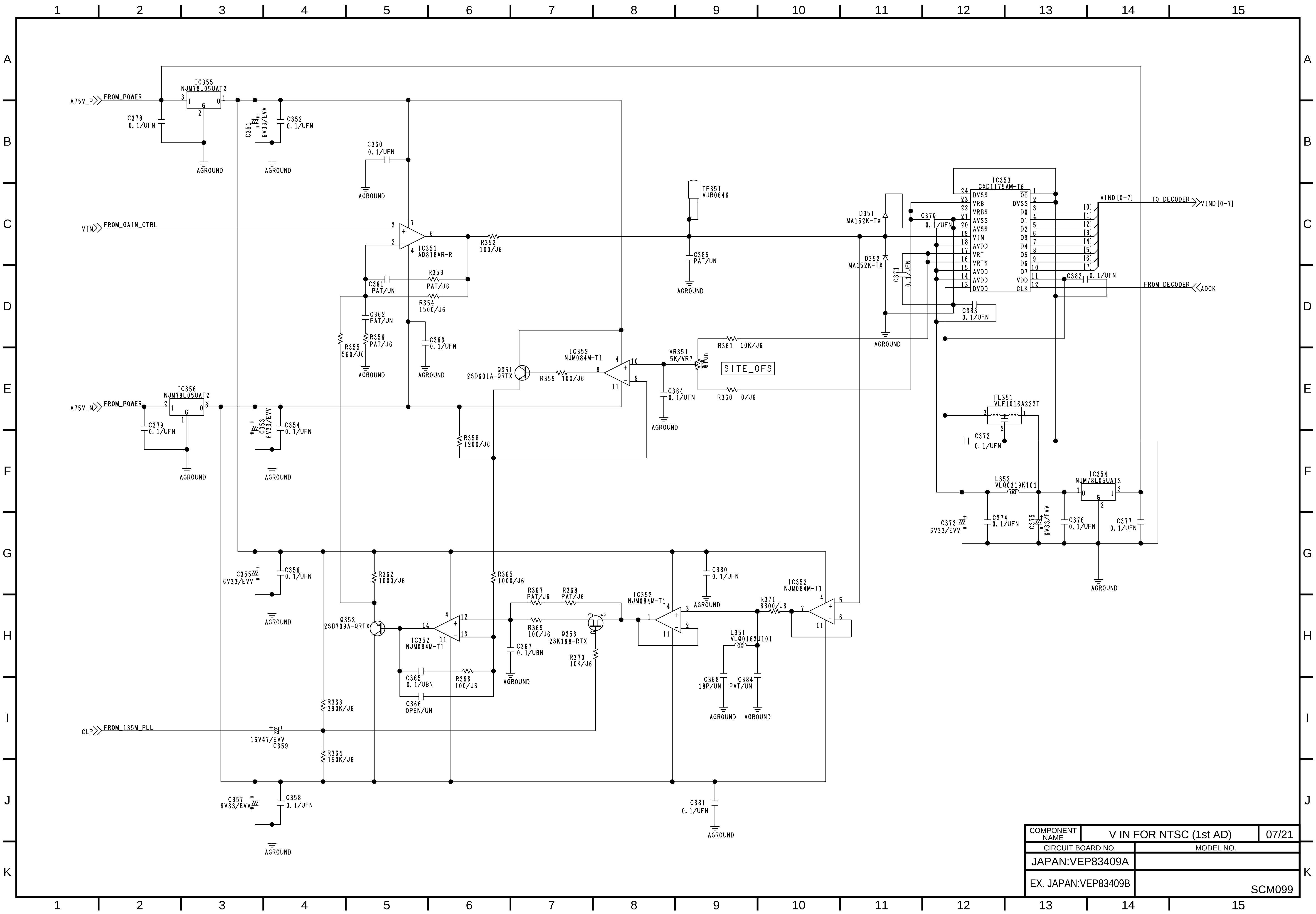

VIN_D FROM SYNC_SEP
SETUP_CUT_S FROM SYS_IF
SERIAL_L FROM SYS_IF
KILL_HI FROM SYS_IF
VBLK_BW1 FROM CONNECTOR
VBLK_BW2 FROM CONNECTOR
VCC
R168 10K/J6
R169 10K/J6
SIN_VDATA[0-9] FROM INBUFF
SIN_VDATA[0-9]
SIN_27M FROM INBUFF
MIDW FROM TBC
CWRST FROM TBC
CLAMP_Y FROM TBC
SIN_FRM FROM TBC
SDAT[0-7]
C254 0.1/UFN
IC251 VSI2153A
DIN0 SINFRMO SINFRM VCC MIDW CLAMPY WRST 27M GND SINH SINF
DIN1 DIN2 DIN3 GND DIN4 DIN5 DIN6 DIN7 VCC YCL NENTL
CKY CKC SETUP_CUT_S SETUP_CUT_H VCC DEC_OFF VBLK_VB KILL_HI BPF_H GND KILL_H
SERIALL CDELAY0 CDELAY1 CDELAY2 GND VCC WEC0 WEC1 INPFRM FSCFIXL FRMSEL
C251 0.1/UFN
C253 0.1/UFN
YC_L FROM SYS_IF
COMPONENT_L FROM SYS_IF
CDELAY[0-2] TO TBC
CDELAY[0-2]
GROUND
C252 0.1/UFN
FROM TBC WEC_I
TO TBC WEC_O
INP_FRM FROM SYNC_SEP
C266 0.1/UFN
IC252 VSI2154
DIN2 DIN1 DIN0 VCC GND GND 27M GND I/O I/O
DIN3 DIN4 DIN5 GND DIN6 DIN7 DIN8 DIN9 VCC I/O I/O
I/O DOUT7 DOUT6 DOUT5 VCC DOUT4 DOUT3 DOUT2 DOUT1 GND DOUT0
C265 0.1/UFN
C263 0.1/UFN
C264 0.1/UFN
GROUND
IC253 T74HCT541AF1
G2 G1 A1 A2 A3 A4 A5 A6 A7 A8 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
TO DIG_DEC SINV
TO DIG_DEC/SYNC_SEP SINH
TO 2nd_AD SETUP_CUT_H
TO VIN VBLK_SETUP 3
TO TBC TBC_WH
TO TBC/EE_TBC TBC_WV
TO OUTBUFF DET_H
TO EE_TBC EE_SINH
TO SYS_IF/4fsc_PLL VIDEO_IN_L
TO TBC/EE_TBC TBC_WCK
TO DIG_DEC YCLK
IC254 T74HCT374AF1
C1 EN D0 D1 D2 D3 D4 D5 D6 D7 Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7
TBC_Y[0-7]
TO TBC/EE_TBC TBC_Y[0-7]
IC255 74F574SJ-R1
CLK OC 1D 2D 3D 4D 5D 6D 7D 8D 1Q 2Q 3Q 4Q 5Q 6Q 7Q 8Q
R251 100/J6
GROUND
IC259 T74HCT374AF1
TBC_C[0-7]
TO TBC/EE_TBC TBC_C[0-7]
TO DECODER BPF_H
TO DECODER/2nd_AD_PR/2nd_AD_PB KILL_H
TO OUTBUFF FRM_SEL
TO DIG_DEC SDAT[0-7]
FROM SYS_IF FSC_FIX_L
VCC
IC253 T74HCT541AF1
C256 0.1/UFN
IC254 T74HCT374AF1
C257 0.1/UFN
IC255 74F574SJ-R1
C258 0.1/UFN
IC259 T74HCT374AF1
C262 0.1/UFN
GROUND
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	V IN FOR NTSC (SIF DEC)	05/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B		

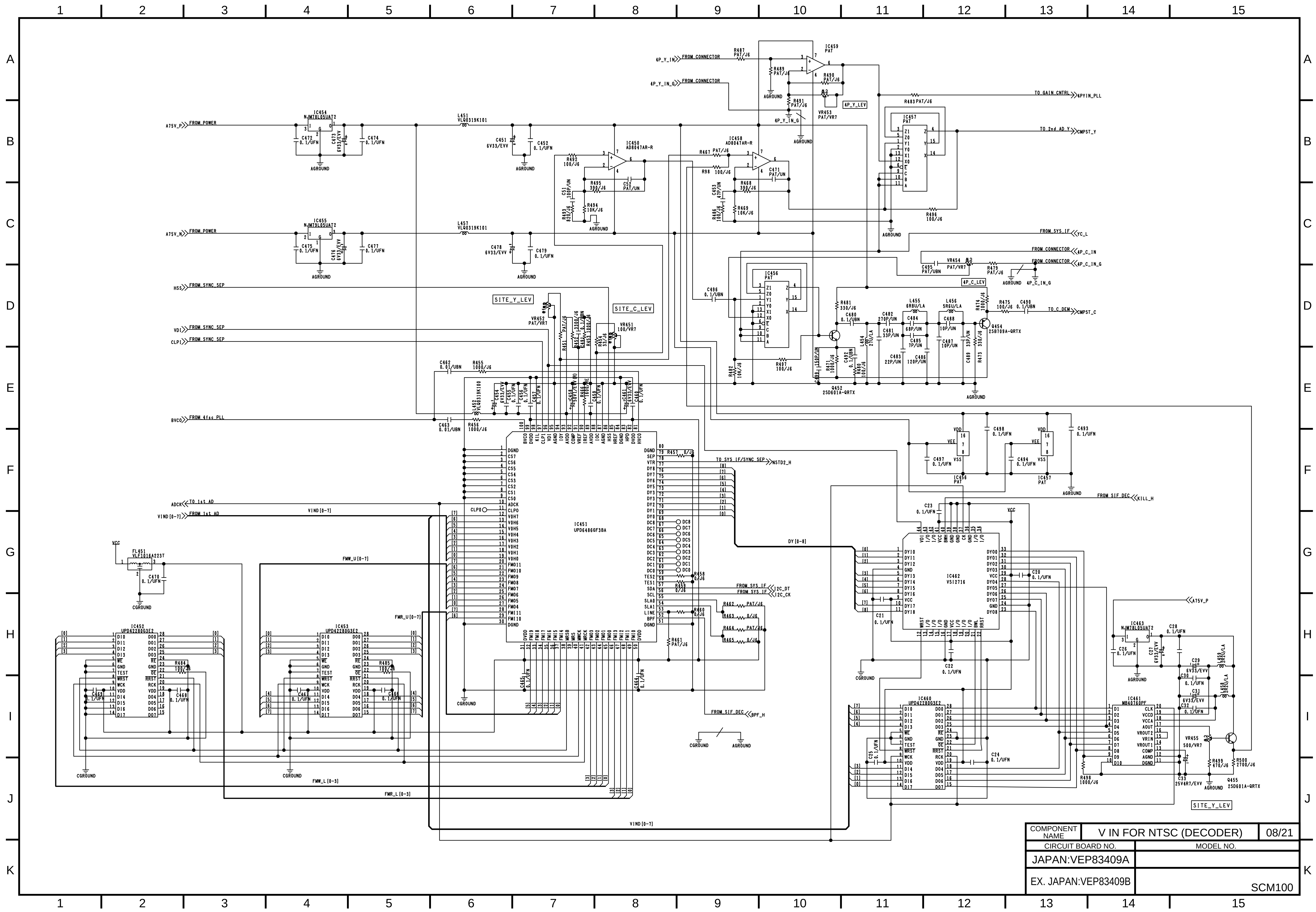
SCM097


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
L301
VLQ0319K101
Q303
2SD601A-QRTX
C301
16V10/EVV
C302
0.1/UFN
AGROUND
R302
1000/J6
R304
330/J6
FL301
VLF1294-1
IN
OUT
G1 G2 G3
Q302
2SD601A-QRTX
D301
MA152K-TX
C306
0.1/UFN
IC301
EL2082CS-T1
VGAIN
IIN
VIN
V-
EN
V+
IOUT
GND
R307
1000/J6
TO_1st_AD
VIN
R308
560/J6
VIDEO_IN
FROM CONNECTOR
VIDEO_IN_G
(GARDRING)
R317
0/J6
C322
PAT
R318
33K/J6
VIDEO_IN_G
R301
5600/J6
R303
100/J6
R305
330/J6
R306
1000/J6
C303
25V4R7/EVV
C304
0.1/UFN
C305
0.1/UFN
D302
MA152K-TX
L302
VLQ0319K101
Q301
2SB709A-QRTX
C307
16V10/EVV
C308
0.1/UFN
A9V_P
FROM POWER
L303
VLQ0319K101
C309
16V10/EVV
C310
0.1/UFN
SITE_LEV
R309
18K/J6
VR301
5K/VR7
R310
0/J6
C311
0.1/UFN
IC302
NJM082BM-T1
C312
0.1/UBN
R311
1000/J6
R312
100/J6
A9V_N
L304
VLQ0319K101
C317
16V10/EVV
C318
0.1/UFN
C321
0.1/UFN
IC303
DAC10GS-L
VLC
IO
V-
IO
B1
B2
B3
B4
B5
COMP
VREF-
VREF+
V+
B10
B9
B8
B7
B6
R315
8200/J6
R316
8200/J6
C319
0.1/UFN
C320
0.1/UFN
GAIN[0-7]
FROM SYS IF
GAIN[0-7]
FROM SYS IF
YC_L
C5
0.1/UFN
4PYIN_PLL
FROM DECODER
IC406
TC4W53FTE12L
TO SYNC SEP
VIN1
C6
0.1/UFN
16V47/EVV
C450
A75V_P
IC403
NJM78L05UAT2
C437
0.1/UFN
C438
6V33/EVV
C439
0.1/UFN
C443
0.1/UFN
IC405
AN91A12S
VIDEO
FB2
CLAMP
IOUT
IIN
C1
C2
FB1
FB0
VCC1
GND3
SG1
SG2
PG1
PG2
BIAS
INT
GND2
GND1
SYP
C444
39P/UN
C445
8P/UN
R433
2200/J6
C446
180P/UN
L406
VLQ0133J471
C447
0.1/UFN
C448
0.1/UFN
D401
MA152WK-TX
R432
1K/J6
C449
PAT/EVN
R434
PAT/J6
R435
PAT/J6
R427
ERDS2TJ392
C1
0.01/UBN
R436
220K/J6
R437
680K/J6
R438
10K/J6
R439
10K/J6
R440
10K/J6
C2
0.01/UBN
C3
82P/UN
C4
0.01/UBN
A75V_N
IC404
NJM79L05UAT2
C440
0.1/UFN
C441
6V33/EVV
C442
0.1/UFN
FROM POWER
A5V_P
L407
VLQ0319K101
C7
0.1/UFN
C8
6V33/EVV(R)
IC407
MC74HC00AF-R
R441
5600/J6
TO_135M_PLL
CLPT
C9
100P/UN
R431
0/J6
TO_4fsc_PLL
CSYNC

COMPONENT NAME	V IN FOR NTSC (GAIN CTRL)	06/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B		SCM098

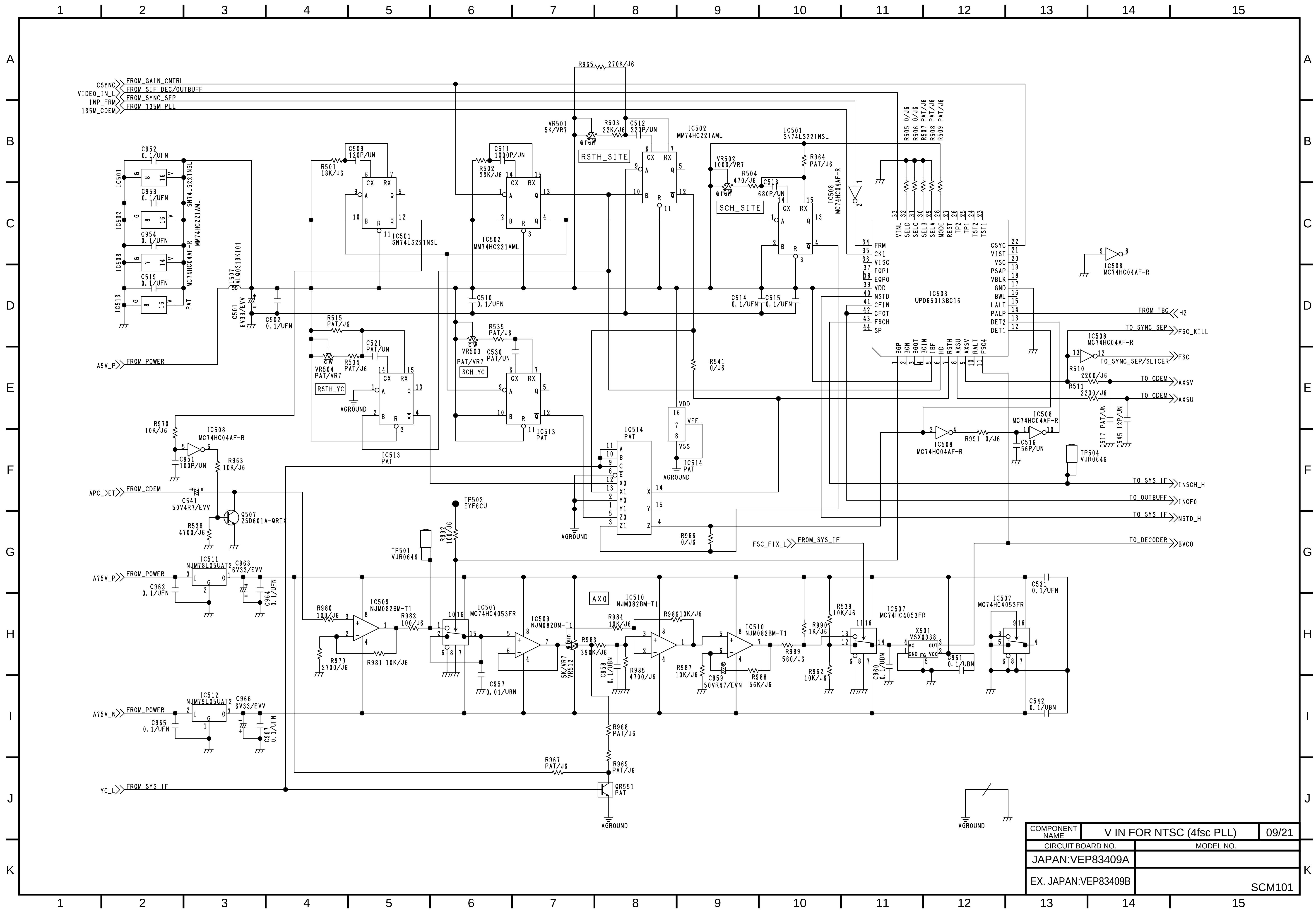

A75V_P
FROM_POWER
IC355
NJM78L05UAT2
3
I
G
O
1
2
C378
0.1/UFN
AGROUND
C351
6V33/EVV
C352
0.1/UFN
AGROUND
C360
0.1/UFN
AGROUND
VIN
FROM_GAIN_CTRL
3
2
7
6
4
IC351
AD818AR-R
R352
100/J6
C361
PAT/UN
R353
PAT/J6
R354
1500/J6
C362
PAT/UN
R356
PAT/J6
AGROUND
C363
0.1/UFN
AGROUND
R355
560/J6
Q351
2SD601A-QRTX
R359
100/J6
IC352
NJM084M-T1
4
8
10
9
11
VR351
5K/VR7
C364
0.1/UFN
AGROUND
SITE_OFS
R361
10K/J6
R360
0/J6
TP351
VJR0646
C385
PAT/UN
AGROUND
D351
MA152K-TX
D352
MA152K-TX
AGROUND
C370
0.1/UFN
C371
0.1/UFN
C383
0.1/UFN
IC353
CXD1175AM-T6
24 DVSS
23 VRB
22 VRBS
21 AVSS
20 AVSS
19 VIN
18 AVDD
17 VRT
16 VRTS
15 AVDD
14 AVDD
13 DVDD
1 OE
2 DVSS
3 D0
4 D1
5 D2
6 D3
7 D4
8 D5
9 D6
10 D7
11 VDD
12 CLK
[0]
[1]
[2]
[3]
[4]
[5]
[6]
[7]
VIND[0-7]
TO DECODER
VIND[0-7]
C382
0.1/UFN
FROM_DECODER
ADCK
FL351
VLF1016A223T
3
1
2
C372
0.1/UFN
L352
VLQ0319K101
IC354
NJM78L05UAT2
1
O
G
I
3
2
C373
6V33/EVV
C374
0.1/UFN
C375
6V33/EVV
C376
0.1/UFN
C377
0.1/UFN
AGROUND
A75V_N
FROM_POWER
IC356
NJM79L05UAT2
2
I
G
O
3
1
C379
0.1/UFN
AGROUND
C353
6V33/EVV
C354
0.1/UFN
AGROUND
R358
1200/J6
C355
6V33/EVV
C356
0.1/UFN
AGROUND
R362
1000/J6
Q352
2SB709A-QRTX
IC352
NJM084M-T1
14
4
12
13
11
C365
0.1/UBN
R366
100/J6
C366
OPEN/UN
R365
1000/J6
R367
PAT/J6
R368
PAT/J6
R369
100/J6
Q353
2SK198-RTX
D
S
G
C367
0.1/UBN
AGROUND
R370
10K/J6
IC352
NJM084M-T1
1
4
3
2
11
C380
0.1/UFN
AGROUND
R371
6800/J6
IC352
NJM084M-T1
7
4
5
6
11
L351
VLQ0163J101
C368
18P/UN
C384
PAT/UN
AGROUND
AGROUND
R363
390K/J6
CLP
FROM_135M_PLL
16V47/EVV
C359
R364
150K/J6
C357
6V33/EVV
C358
0.1/UFN
AGROUND
C381
0.1/UFN
AGROUND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	V IN FOR NTSC (1st AD)	07/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM099	

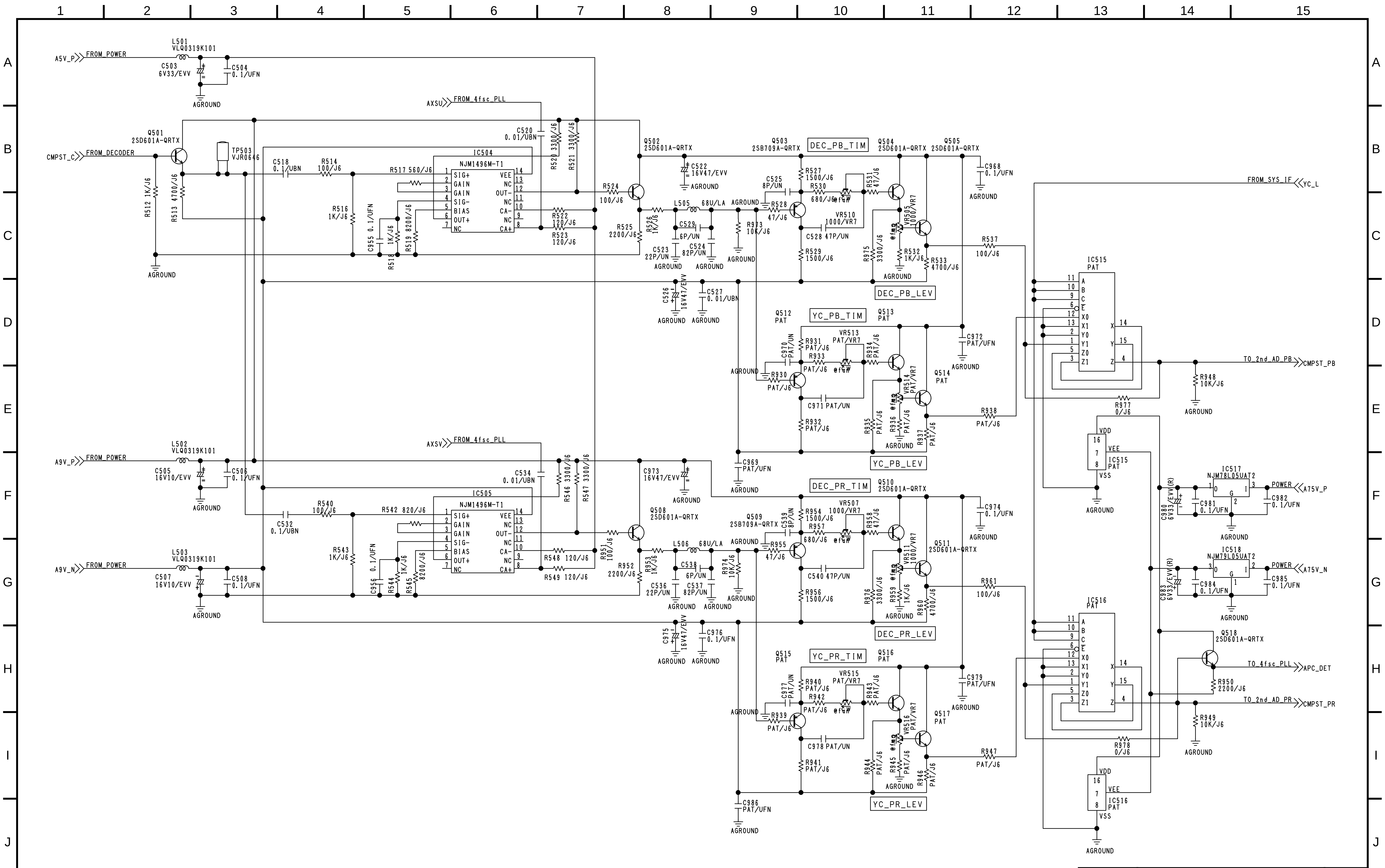


IC454 NJM78L05UAT2
IC455 NJM78L05UAT2
IC450 AD8047AR-R
IC458 AD8047AR-R
IC459 PAT
IC457 PAT
IC456 PAT
IC451 UPD6486GF3BA
IC452 UPD42280G3E2
IC453 UPD42280G3E2
IC460 UPD42280G3E2
IC462 VSI2716
IC461 MB40760PF
IC463 NJM78L05UAT2
FL451 VLF1016A223T
L451 VLQ0319K101
L457 VLQ0319K101
L455 6R8U/LA
L456 5R6U/LA
Q452 2SD601A-QRTX
Q454 2SB709A-QRTX
Q455 2SD601A-QRTX
VR451 100/VR7
VR452 PAT/VR7
VR453 PAT/VR7
VR454 PAT/VR7
VR455 500/VR7
A75V_P FROM POWER
A75V_N FROM POWER
HSS FROM SYNC SEP
VDI FROM SYNC SEP
CLPI FROM SYNC SEP
BVCO FROM 4fsc PLL
ADCK TO 1st AD
VIND[0-7] FROM 1st AD
4P_Y_IN FROM CONNECTOR
4P_Y_IN_G FROM CONNECTOR
TO GAIN CNTRL 4PYIN_PLL
TO 2nd AD Y CMPST_Y
FROM SYS IF YC_L
FROM CONNECTOR 4P_C_IN
FROM CONNECTOR 4P_C_IN_G
TO C DEM CMPST_C
TO SYS IF/SYNC SEP NSTD2_H
FROM SIF DEC KILL_H
FROM SYS IF I2C_DT
FROM SYS IF I2C_CK
FROM SIF DEC BPF_H
A75V_P
SITE_Y_LEV
SITE_C_LEV
4P_Y_LEV
4P_C_LEV
DY[0-8]
FMW_U[0-7]
FMR_U[0-7]
FMW_L[0-3]
FMR_L[0-3]
VIND[0-7]
AGROUND
CGROUND
VCC

COMPONENT NAME	V IN FOR NTSC (DECODER)	08/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM100	

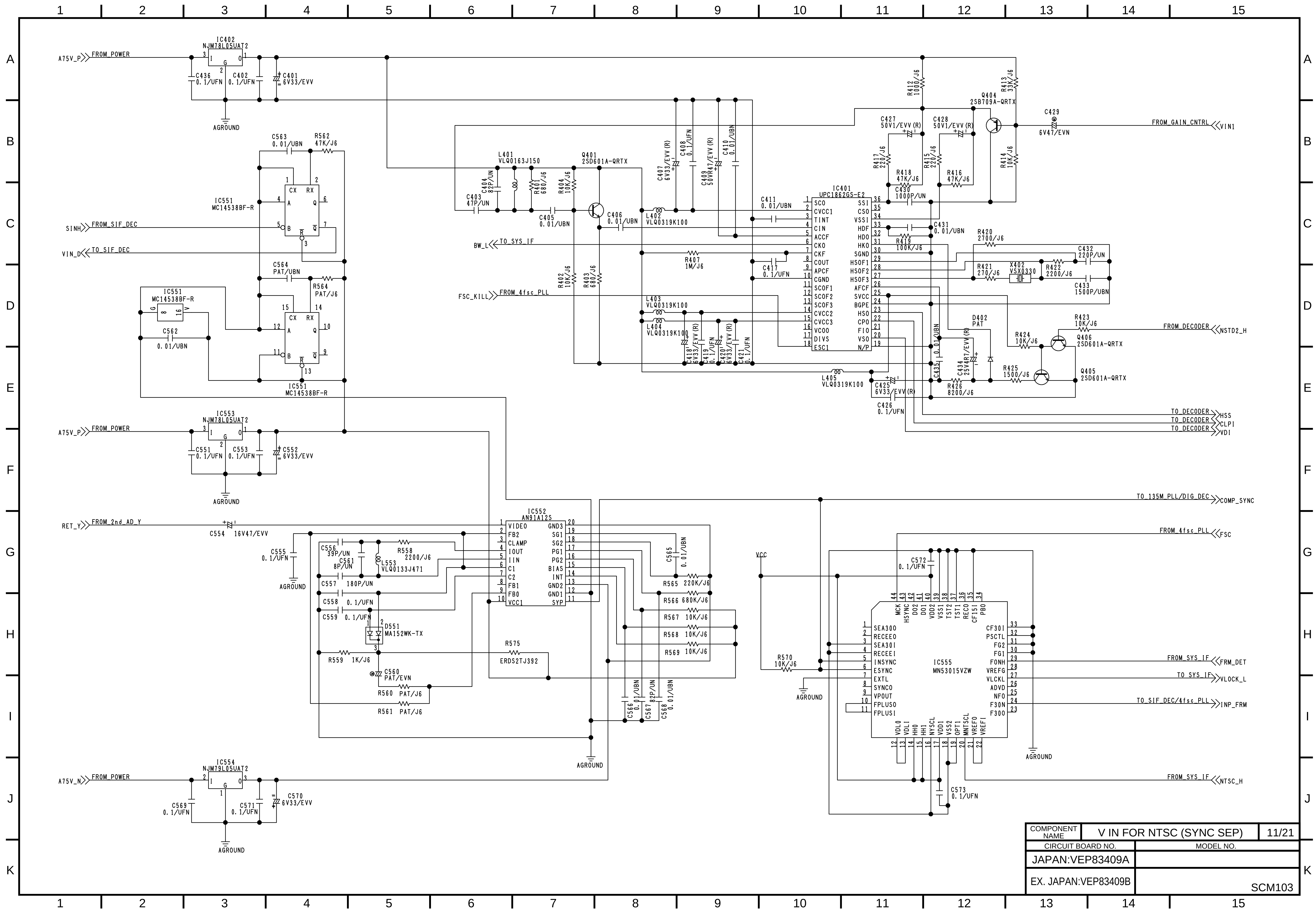

CSYNC
VIDEO_IN_L
INP_FRM
135M_CDEM
FROM GAIN CNTRL
FROM SIF DEC/OUTBUFF
FROM SYNC SEP
FROM 135M PLL
A5V_P
FROM POWER
APC_DET
FROM CDEM
A75V_P
A75V_N
YC_L
FROM SYS IF
FSC_FIX_L
FROM TBC
H2
TO SYNC SEP
FSC_KILL
TO SYNC SEP/SLICER
FSC
TO CDEM
AXSV
AXSU
TO SYS IF
INSCH_H
TO OUTBUFF
INCF0
NSTD_H
TO DECODER
BVCO
IC501 SN74LS221NSL
IC502 MM74HC221AML
IC503 UPD65013BC16
IC507 MC74HC4053FR
IC508 MC74HC04AF-R
IC509 NJM082BM-T1
IC510 NJM082BM-T1
IC511 NJM78L05UAT2
IC512 NJM79L05UAT2
IC513 PAT
IC514 PAT
Q507 2SD601A-QRTX
QR551 PAT
X501 VSX0338
L507 VLQ0319K101
TP501 VJR0646
TP502 EYF6CU
TP504 VJR0646
VR501 5K/VR7
VR502 1000/VR7
VR503 PAT/VR7
VR504 PAT/VR7
VR512 5K/VR7
RSTH_SITE
SCH_SITE
RSTH_YC
SCH_YC
AX0
AGROUND
R965 270K/J6
R503 22K/J6
C512 220P/UN
R501 18K/J6
C509 120P/UN
R502 33K/J6
C511 1000P/UN
R504 470/J6
C513 680P/UN
R964 PAT/J6
R505 0/J6
R506 0/J6
R507 PAT/J6
R508 PAT/J6
R509 PAT/J6
C952 0.1/UFN
C953 0.1/UFN
C954 0.1/UFN
C519 0.1/UFN
C501 6V33/EVV
C502 0.1/UFN
C510 0.1/UFN
C514 0.1/UFN
C515 0.1/UFN
R515 PAT/J6
C521 PAT/UN
R534 PAT/J6
R535 PAT/J6
C530 PAT/UN
R541 0/J6
R970 10K/J6
C951 100P/UN
R963 10K/J6
C541 50V4R7/EVV
R538 4700/J6
R966 0/J6
R510 2200/J6
R511 2200/J6
C517 PAT/UN
C545 12P/UN
R991 0/J6
C516 56P/UN
C963 6V33/EVV
C962 0.1/UFN
C964 0.1/UFN
C966 6V33/EVV
C965 0.1/UFN
C967 0.1/UFN
R980 100/J6
R979 2700/J6
R982 100/J6
R981 10K/J6
R992 100/J6
C957 0.01/UBN
R983 390K/J6
C958 0.1/UBN
R984 10K/J6
R986 10K/J6
R985 4700/J6
R987 10K/J6
C959 50VR47/EVN
R988 56K/J6
R989 560/J6
R990 1K/J6
R539 10K/J6
R962 10K/J6
C960 0.1/UBN
C961 0.1/UBN
C531 0.1/UFN
C542 0.1/UBN
R968 PAT/J6
R967 PAT/J6
R969 PAT/J6
VDD
VEE
VSS
FRM
CK1
VISC
EQPI
EQPO
VDD
NSTD
CFIN
CFOT
FSCH
SP
CSYC
VIST
VSC
PSAP
VBLK
GND
BWL
LALT
PALP
DET2
DET1
VINL
SELD
SELC
SELB
SELA
MODE
REST
TP2
TP1
TST2
TST1
BGP
BGN
BGOT
BGIN
IBF
HD
RSTH
AXSU
AXSV
RALT
FSC4

COMPONENT NAME	V IN FOR NTSC (4fsc PLL)	09/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM101	



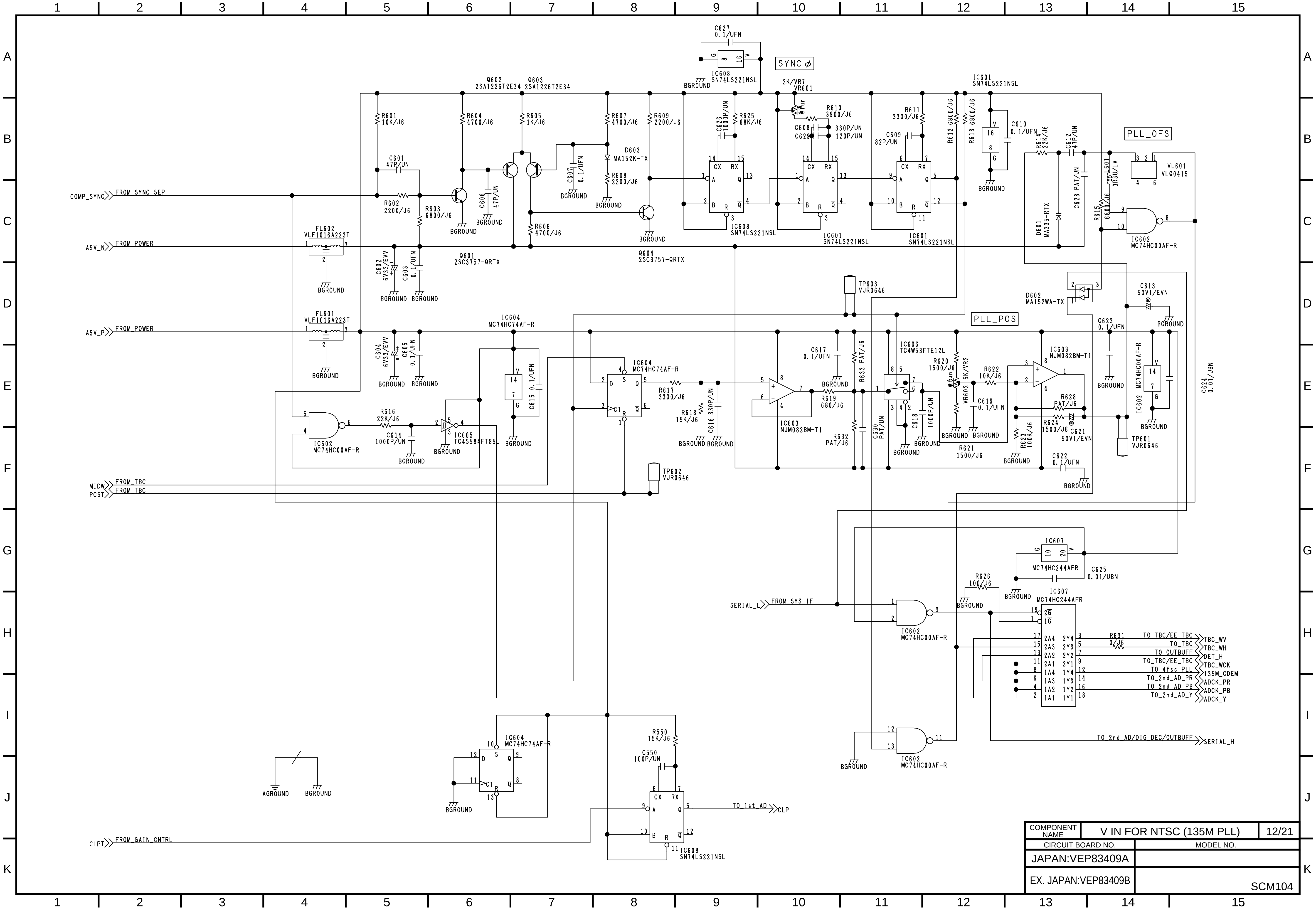
A5V_P FROM_POWER
L501 VLQ0319K101
C503 6V33/EVV
C504 0.1/UFN
AGROUND
AXSU FROM_4fsc_PLL
CMPST_C FROM_DECODER
Q501 2SD601A-QRTX
TP503 VJR0646
C518 0.1/UBN
R514 100/J6
R517 560/J6
IC504 NJM1496M-T1
SIG+ GAIN GAIN BIAS SIG- OUT+ NC VEE NC OUT- NC CA- NC CA+
R512 1K/J6
R513 4700/J6
R516 1K/J6
C955 0.1/UFN
R518 1K/J6
R519 8200/J6
C520 0.01/UBN
R520 3300/J6
R521 3300/J6
R522 120/J6
R523 120/J6
Q502 2SD601A-QRTX
R524 100/J6
R525 2200/J6
R526 1K/J6
L505 68U/LA
C522 16V47/EVV
C529 6P/UN
C523 22P/UN
C524 82P/UN
C526 16V47/EVV
C527 0.01/UBN
R973 10K/J6
Q503 2SB709A-QRTX
DEC_PB_TIM
C525 8P/UN
R527 1500/J6
R528 47/J6
R530 680/J6
R529 1500/J6
C528 47P/UN
VR510 1000/VR7
R531 47/J6
Q504 2SD601A-QRTX
Q505 2SD601A-QRTX
VR505 1000/VR7
R975 3300/J6
R532 1K/J6
R533 4700/J6
C968 0.1/UFN
R537 100/J6
DEC_PB_LEV
FROM_SYS_IF YC_L
YC_PB_TIM
Q512 PAT
Q513 PAT
C970 PAT/UN
R931 PAT/J6
VR513 PAT/VR7
R933 PAT/J6
R934 PAT/J6
R930 PAT/J6
C971 PAT/UN
VR514 PAT/VR7
Q514 PAT
R932 PAT/J6
R935 PAT/J6
R936 PAT/J6
R937 PAT/J6
C972 PAT/UFN
R938 PAT/J6
C969 PAT/UFN
YC_PB_LEV
IC515 PAT
A B C E X0 X1 Y0 Y1 Z0 Z1 X Y Z
TO_2nd_AD_PB CMPST_PB
R948 10K/J6
R977 0/J6
VDD VEE VSS
A9V_P FROM_POWER
L502 VLQ0319K101
C505 16V10/EVV
C506 0.1/UFN
AXSV FROM_4fsc_PLL
C534 0.01/UBN
R546 3300/J6
R547 3300/J6
C973 16V47/EVV
C532 0.1/UBN
R540 100/J6
R542 820/J6
IC505 NJM1496M-T1
R543 1K/J6
C956 0.1/UFN
R544 1K/J6
R545 8200/J6
R548 120/J6
R549 120/J6
Q508 2SD601A-QRTX
R951 100/J6
R952 2200/J6
R953 1K/J6
L506 68U/LA
C538 6P/UN
C536 22P/UN
C537 82P/UN
R974 10K/J6
A9V_N FROM_POWER
L503 VLQ0319K101
C507 16V10/EVV
C508 0.1/UFN
DEC_PR_TIM
Q509 2SB709A-QRTX
C539 8P/UN
R954 1500/J6
VR507 1000/VR7
R958 47/J6
R955 47/J6
R957 680/J6
Q510 2SD601A-QRTX
Q511 2SD601A-QRTX
VR511 1000/VR7
C540 47P/UN
R956 1500/J6
R976 3300/J6
R959 1K/J6
R960 4700/J6
C974 0.1/UFN
R961 100/J6
C975 16V47/EVV
C976 0.1/UFN
DEC_PR_LEV
YC_PR_TIM
Q515 PAT
Q516 PAT
C977 PAT/UN
R940 PAT/J6
VR515 PAT/VR7
R942 PAT/J6
R943 PAT/J6
R939 PAT/J6
C978 PAT/UN
VR516 PAT/VR7
Q517 PAT
R941 PAT/J6
R944 PAT/J6
R945 PAT/J6
R946 PAT/J6
C979 PAT/UFN
R947 PAT/J6
C986 PAT/UFN
YC_PR_LEV
IC516 PAT
R978 0/J6
IC517 NJM78L05UAT2
C980 6V33/EVV(R)
C981 0.1/UFN
C982 0.1/UFN
POWER A75V_P
IC518 NJM79L05UAT2
C983 6V33/EVV(R)
C984 0.1/UFN
C985 0.1/UFN
POWER A75V_N
Q518 2SD601A-QRTX
TO_4fsc_PLL APC_DET
R950 2200/J6
TO_2nd_AD_PR CMPST_PR
R949 10K/J6

COMPONENT NAME	V IN FOR NTSC (CDEM)	10/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM102	


A75V_P FROM POWER
IC402 NJM78L05UAT2
C436 0.1/UFN
C402 0.1/UFN
C401 6V33/EVV
AGROUND
C563 0.01/UBN
R562 47K/J6
IC551 MC14538BF-R
CX RX A B Q
SINH FROM SIF DEC
VIN_D TO SIF DEC
C564 PAT/UBN
R564 PAT/J6
C562 0.01/UBN
IC553 NJM78L05UAT2
C551 0.1/UFN
C553 0.1/UFN
C552 6V33/EVV
RET_Y FROM 2nd AD Y
C554 16V47/EVV
C555 0.1/UFN
C556 39P/UN
C561 8P/UN
R558 2200/J6
L553 VLQ0133J471
C557 180P/UN
C558 0.1/UFN
C559 0.1/UFN
D551 MA152WK-TX
R559 1K/J6
C560 PAT/EVN
R560 PAT/J6
R561 PAT/J6
R575 ERDS2TJ392
IC552 AN91A12S
VIDEO FB2 CLAMP IOUT IIN C1 C2 FB1 FB0 VCC1 GND3 SG1 SG2 PG1 PG2 BIAS INT GND2 GND1 SYP
C565 0.01/UBN
R565 220K/J6
R566 680K/J6
R567 10K/J6
R568 10K/J6
R569 10K/J6
C566 0.01/UBN
C567 82P/UN
C568 0.01/UBN
IC554 NJM79L05UAT2
A75V_N FROM POWER
C569 0.1/UFN
C571 0.1/UFN
C570 6V33/EVV
L401 VLQ0163J150
C403 47P/UN
C404 82P/UN
R401 680/J6
R404 10K/J6
Q401 2SD601A-QRTX
C405 0.01/UBN
C406 0.01/UBN
L402 VLQ0319K100
R402 10K/J6
R403 680/J6
BW_L TO SYS IF
FSC_KILL FROM 4fsc PLL
C407 6V33/EVV (R)
C408 0.1/UFN
C409 50VR47/EVV (R)
C410 0.01/UBN
C411 0.01/UBN
R407 1M/J6
C417 0.1/UFN
L403 VLQ0319K100
L404 VLQ0319K100
C418 6V33/EVV (R)
C419 0.1/UFN
C420 6V33/EVV (R)
C421 0.1/UFN
IC401 UPC1862GS-E2
SCO CVCC1 TINT CIN ACCF CKO CKF COUT APCF CGND SCOF1 SCOF2 SCOF3 CVCC2 CVCC3 VCOO DIVS ESC1
SS1 CSO VSS1 HDF HDO HKO SGND HSOF1 HSOF2 HSOF3 AFCF SVCC BGPF HSO CPO FIO VSO N/P
L405 VLQ0319K100
C425 6V33/EVV (R)
C426 0.1/UFN
R412 1000/J6
R413 33K/J6
Q404 2SB709A-QRTX
C427 50V1/EVV (R)
C428 50V1/EVV (R)
R417 220/J6
R418 47K/J6
R415 220/J6
R416 47K/J6
C430 1000P/UN
R414 10K/J6
C429 6V47/EVN
FROM GAIN CNTRL VIN1
C431 0.01/UBN
R419 100K/J6
R420 2700/J6
C432 220P/UN
R421 270/J6
X402 VSX0330
R422 2200/J6
C433 1500P/UBN
D402 PAT
R423 10K/J6
Q406 2SD601A-QRTX
FROM DECODER NSTD2_H
R424 10K/J6
C435 0.01/UBN
C434 25V4R7/EVV (R)
R425 1500/J6
Q405 2SD601A-QRTX
R426 8200/J6
TO DECODER HSS
TO DECODER CLPI
TO DECODER VDI
TO 135M PLL/DIG DEC COMP_SYNC
FROM 4fsc PLL FSC
VCC
C572 0.1/UFN
R570 10K/J6
IC555 MN53015VZW
SEA300 RECEEO SEA301 RECEEI INSYNC ESYNC EXTL SYNCO VPOUT FPLUSO FPLUSI
MCK HSYNC DO2 DO1 VDD2 VSS1 TST2 TST1 RECO CF151 PBO
CF30I PSCTL FG2 FG1 FONH VREFG VLCKL ADVD NFO F30N F300
VDLO VDLI HHO HH1 NYSCL VDD1 VSS2 OPT1 MNTSCL VREFO VREFI
FROM SYS IF FRM_DET
TO SYS IF VLOCK_L
TO SIF DEC/4fsc PLL INP_FRM
FROM SYS IF NTSC_H
C573 0.1/UFN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

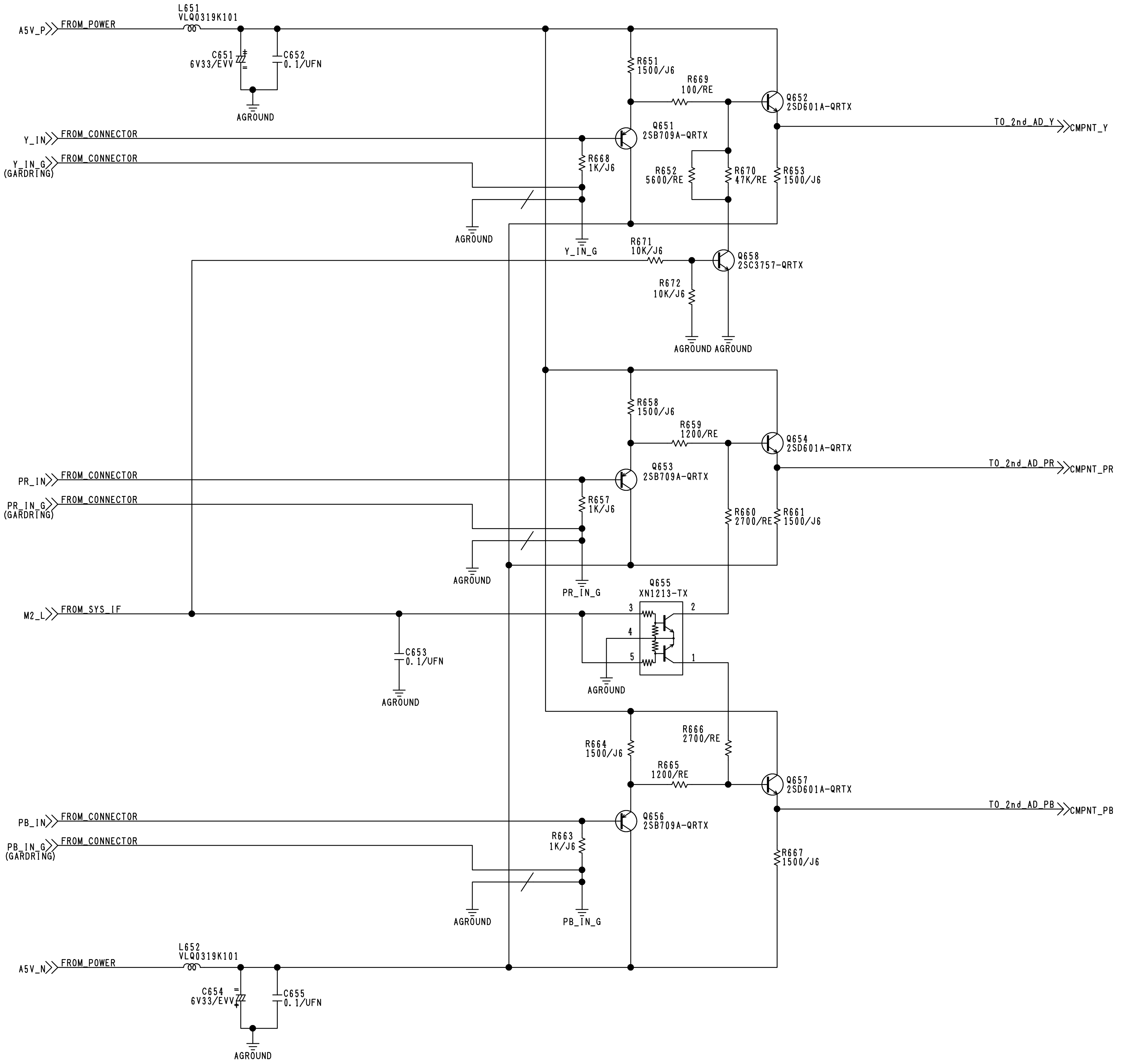
COMPONENT NAME	V IN FOR NTSC (SYNC SEP)	11/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B		

SCM103

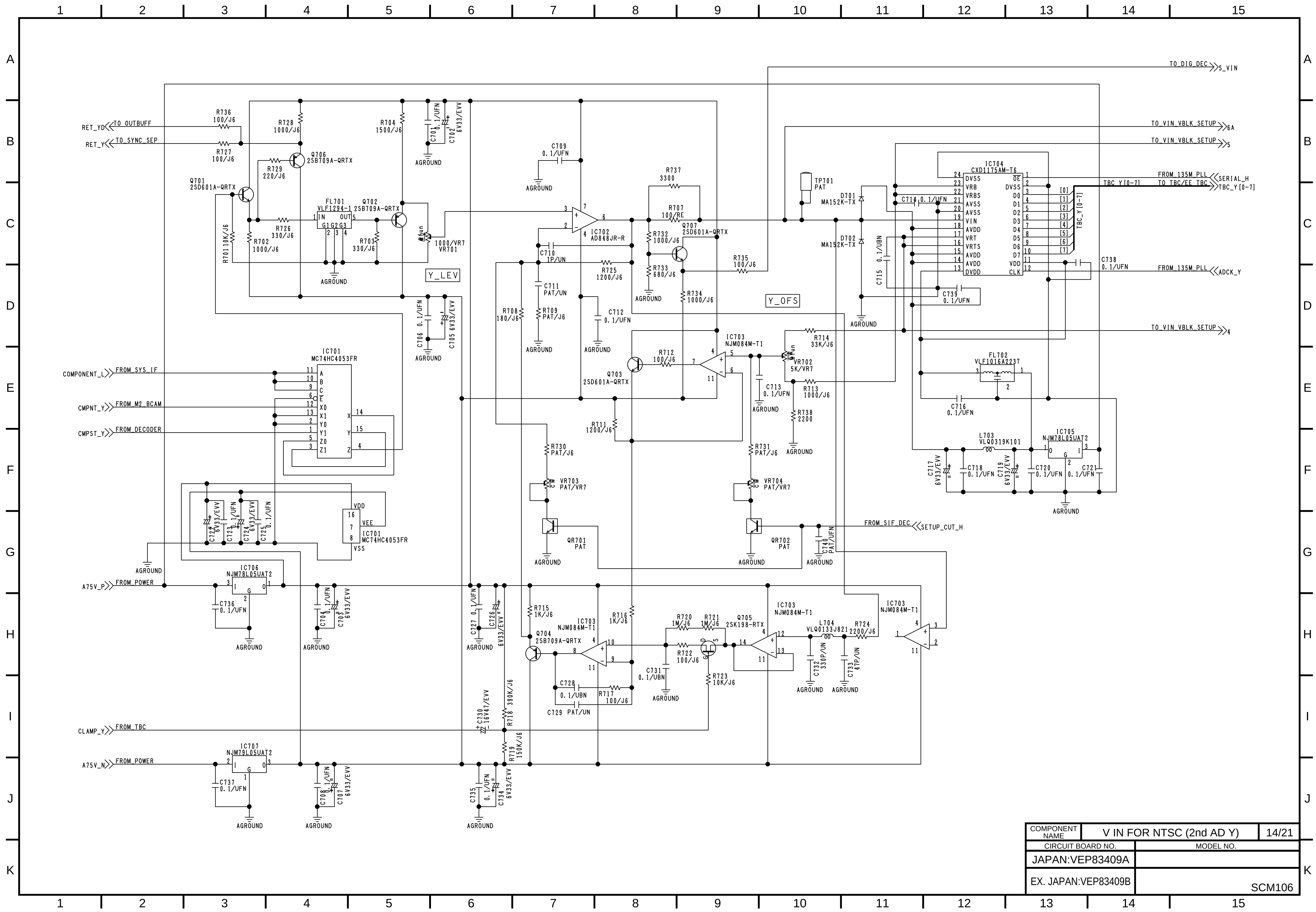


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
C627 0.1/UFN
IC608 SN74LS221NSL
SYNC ϕ
2K/VR7 VR601
IC601 SN74LS221NSL
Q602 2SA1226T2E34
Q603 2SA1226T2E34
R601 10K/J6
R604 4700/J6
R605 1K/J6
R607 4700/J6
R609 2200/J6
C626 1000P/UN
R625 68K/J6
R610 3900/J6
C608 330P/UN
C629 120P/UN
R611 3300/J6
C609 82P/UN
R612 6800/J6
R613 6800/J6
C610 0.1/UFN
PLL_OFS
C601 47P/UN
D603 MA152K-TX
C607 0.1/UFN
R608 2200/J6
R614 22K/J6
C612 47P/UN
L601 3R3U/LA
VL601 VLQ0415
COMP_SYNC FROM_SYNC_SEP
R602 2200/J6
R603 6800/J6
C606 47P/UN
IC608 SN74LS221NSL
IC601 SN74LS221NSL
C628 PAT/UN
D601 MA335-RTX
R615 6800/J6
IC602 MC74HC00AF-R
A5V_N FROM_POWER
FL602 VLF1016A223T
Q601 2SC3757-QRTX
Q604 2SC3757-QRTX
R606 4700/J6
C602 6V33/EVV
C603 0.1/UFN
BGROUND
TP603 VJR0646
D602 MA152WA-TX
C613 50V1/EVN
IC604 MC74HC74AF-R
PLL_POS
C623 0.1/UFN
A5V_P FROM_POWER
FL601 VLF1016A223T
C604 6V33/EVV
C605 0.1/UFN
C615 0.1/UFN
R617 3300/J6
C617 0.1/UFN
R633 PAT/J6
IC606 TC4W53FTE12L
R620 1500/J6
VR602 5K/VR2
R622 10K/J6
IC603 NJM082BM-T1
IC602 MC74HC00AF-R
C624 0.01/UBN
R618 15K/J6
C616 330P/UN
R619 680/J6
C618 1000P/UN
C619 0.1/UFN
R628 PAT/J6
R624 1500/J6
C621 50V1/EVN
R616 22K/J6
C614 1000P/UN
IC605 TC4S584FT85L
C630 PAT/UN
R632 PAT/J6
R621 1500/J6
R623 100K/J6
TP601 VJR0646
C622 0.1/UFN
MIDW FROM_TBC
PCST FROM_TBC
TP602 VJR0646
IC607 MC74HC244AFR
C625 0.01/UBN
R626 100/J6
SERIAL_L FROM_SYS_IF
IC602 MC74HC00AF-R
R631 0/J6
TO_TBC/EE_TBC TBC_WV
TO_TBC TBC_WH
TO_OUTBUFF DET_H
TO_TBC/EE_TBC TBC_WCK
TO_4fsc_PLL 135M_CDEM
TO_2nd_AD_PR ADCK_PR
TO_2nd_AD_PB ADCK_PB
TO_2nd_AD_Y ADCK_Y
TO_2nd_AD/DIG_DEC/OUTBUFF SERIAL_H
R550 15K/J6
C550 100P/UN
AGROUND BGROUND
TO_1st_AD CLP
CLPT FROM_GAIN_CNTRL
IC608 SN74LS221NSL

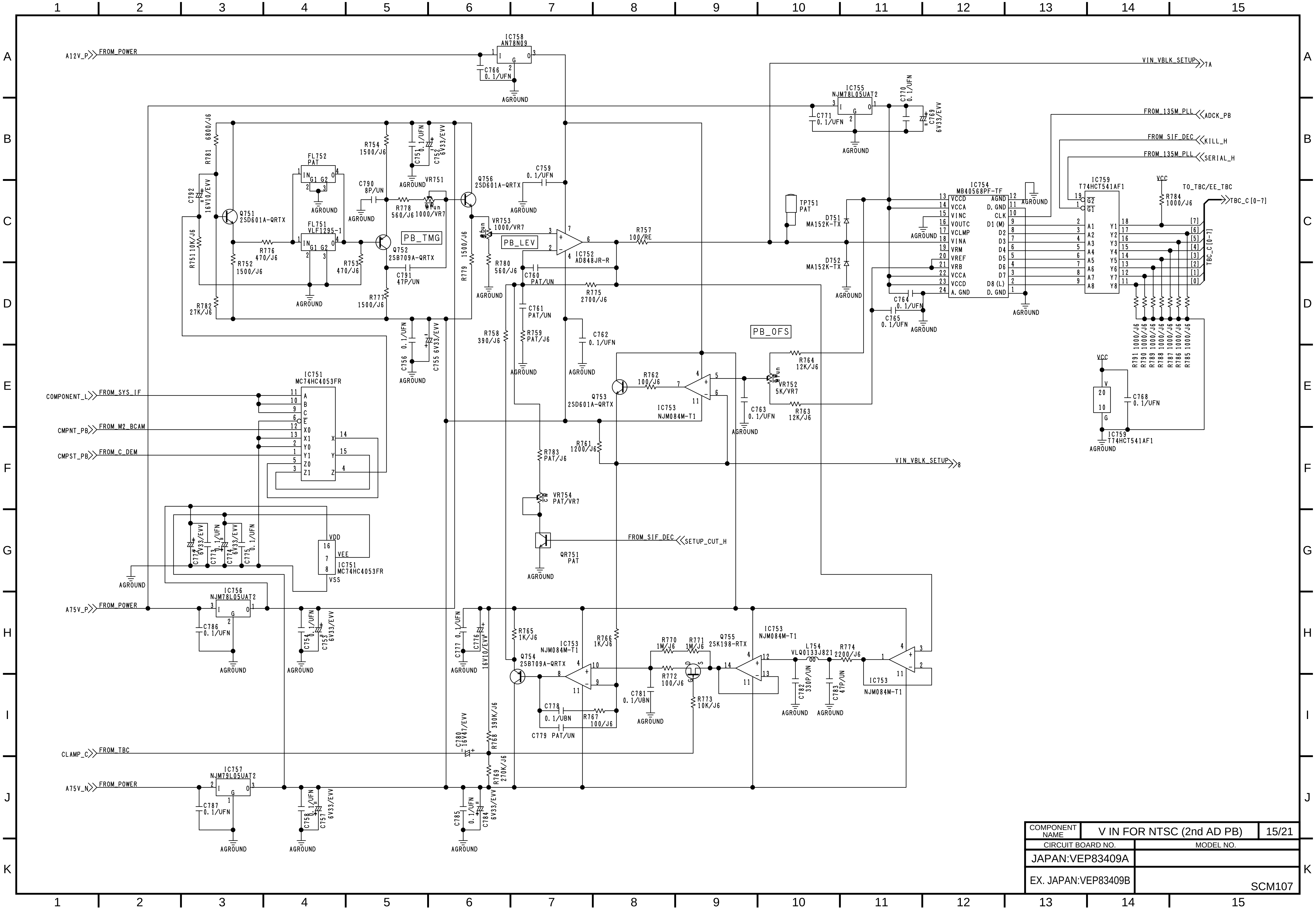
COMPONENT NAME	V IN FOR NTSC (135M PLL)	12/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM104	


A5V_P
FROM_POWER
L651
VLQ0319K101
C651
6V33/EVV
C652
0.1/UFN
AGROUND
R651
1500/J6
R669
100/RE
Q652
2SD601A-QRTX
Q651
2SB709A-QRTX
TO_2nd_AD_Y
CMPNT_Y
Y_IN
FROM_CONNECTOR
Y_IN_G
(GARDRING)
FROM_CONNECTOR
R668
1K/J6
R652
5600/RE
R670
47K/RE
R653
1500/J6
AGROUND
Y_IN_G
R671
10K/J6
Q658
2SC3757-QRTX
R672
10K/J6
AGROUND
AGROUND
R658
1500/J6
R659
1200/RE
Q654
2SD601A-QRTX
Q653
2SB709A-QRTX
TO_2nd_AD_PR
CMPNT_PR
PR_IN
FROM_CONNECTOR
PR_IN_G
(GARDRING)
FROM_CONNECTOR
R657
1K/J6
R660
2700/RE
R661
1500/J6
AGROUND
PR_IN_G
Q655
XN1213-TX
3
2
4
5
1
M2_L
FROM_SYS_IF
C653
0.1/UFN
AGROUND
AGROUND
R666
2700/RE
R664
1500/J6
R665
1200/RE
Q657
2SD601A-QRTX
TO_2nd_AD_PB
CMPNT_PB
Q656
2SB709A-QRTX
PB_IN
FROM_CONNECTOR
PB_IN_G
(GARDRING)
FROM_CONNECTOR
R663
1K/J6
R667
1500/J6
AGROUND
PB_IN_G
A5V_N
FROM_POWER
L652
VLQ0319K101
C654
6V33/EVV
C655
0.1/UFN
AGROUND

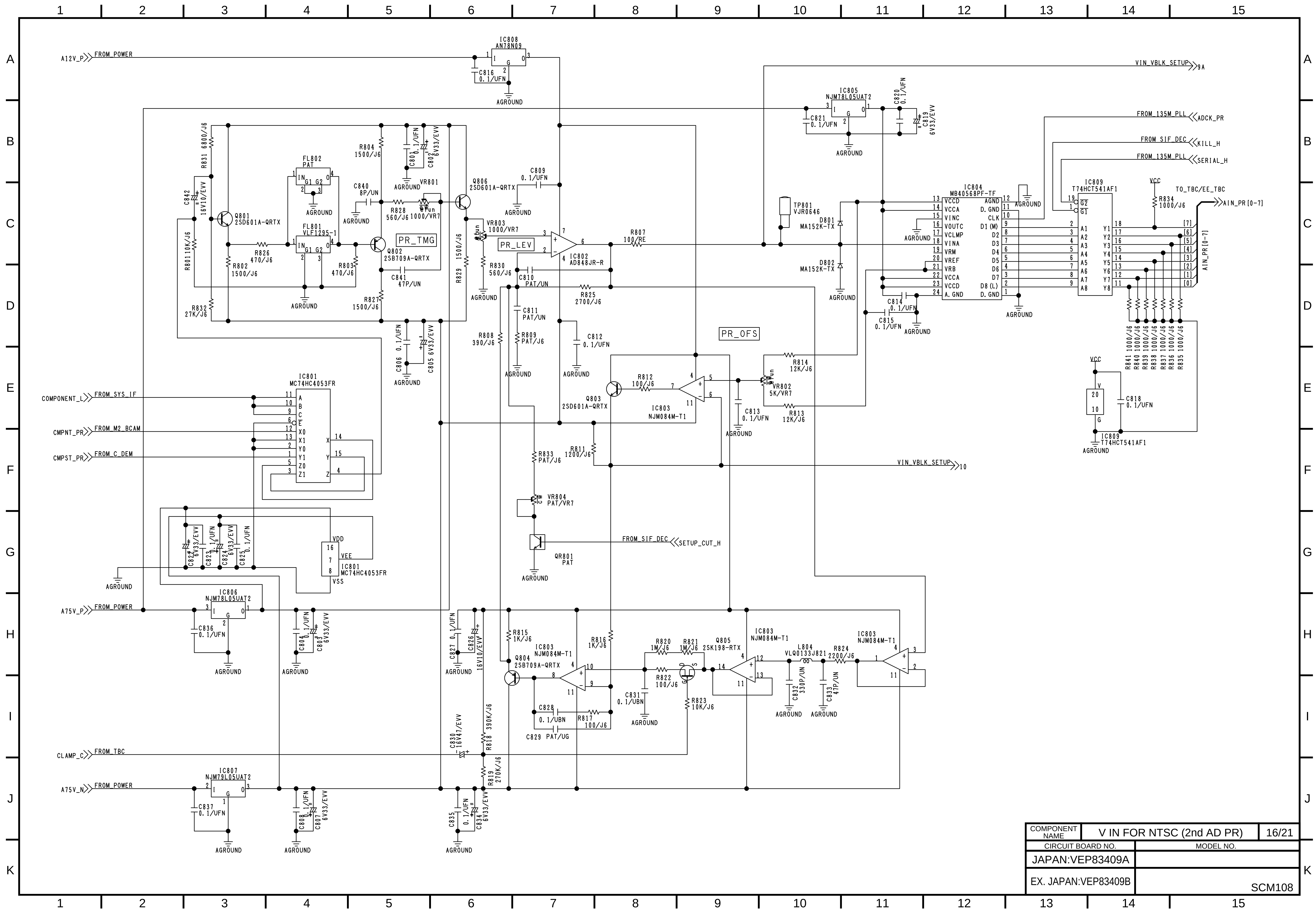
COMPONENT NAME	V IN FOR NTSC (M2 BCAM SELECT)	13/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM105	


TO DIG DEC S_VIN
RET_YD TO OUTBUFF
RET_Y TO SYNC SEP
R736 100/J6
R727 100/J6
R728 1000/J6
R704 1500/J6
C701 0.1/UFN
C702 6V33/EVV
AGROUND
Q706 2SB709A-QRTX
R729 220/J6
Q701 2SD601A-QRTX
FL701 VLF1294-1
Q702 2SB709A-QRTX
R726 330/J6
R703 330/J6
R701 10K/J6
R702 1000/J6
VR701 1000/VR7
Y_LEV
C709 0.1/UFN
C710 1P/UN
IC702 AD848JR-R
R725 1200/J6
C711 PAT/UN
R709 PAT/J6
R708 180/J6
C712 0.1/UFN
R737 3300
R707 100/RE
R732 1000/J6
Q707 2SD601A-QRTX
R733 680/J6
R734 1000/J6
R735 100/J6
Y_OFS
TP701 PAT
D701 MA152K-TX
D702 MA152K-TX
C714 0.1/UFN
C715 0.1/UBN
IC704 CXD1175AM-T6
DVSS VRB VRBS AVSS AVSS VIN AVDD VRT VRTS AVDD AVDD DVDD
OE DVSS D0 D1 D2 D3 D4 D5 D6 D7 VDD CLK
TBC_Y[0-7]
FROM 135M PLL SERIAL_H
TO TBC/EE TBC TBC_Y[0-7]
TO VIN VBLK SETUP 6A
TO VIN VBLK SETUP 5
TO VIN VBLK SETUP 4
C738 0.1/UFN
FROM 135M PLL ADCK_Y
C739 0.1/UFN
C706 0.1/UFN
C705 6V33/EVV
IC703 NJM084M-T1
R712 100/J6
Q703 2SD601A-QRTX
R714 33K/J6
VR702 5K/VR7
R713 1000/J6
C713 0.1/UFN
R738 2200
FL702 VLF1016A223T
C716 0.1/UFN
L703 VLQ0319K101
IC705 NJM78L05UAT2
C717 6V33/EVV
C718 0.1/UFN
C719 6V33/EVV
C720 0.1/UFN
C721 0.1/UFN
R711 1200/J6
R730 PAT/J6
VR703 PAT/VR7
QR701 PAT
R731 PAT/J6
VR704 PAT/VR7
QR702 PAT
FROM SIF DEC SETUP_CUT_H
C740 PAT/UFN
COMPONENT_L FROM SYS IF
CMPNT_Y FROM M2 BCAM
CMPST_Y FROM DECODER
IC701 MC74HC4053FR
A B C E X0 X1 Y0 Y1 Z0 Z1 X Y Z
VDD VEE VSS
C722 6V33/EVV
C723 0.1/UFN
C724 6V33/EVV
C725 0.1/UFN
A75V_P FROM POWER
IC706 NJM78L05UAT2
C736 0.1/UFN
C704 0.1/UFN
C703 6V33/EVV
C727 0.1/UFN
C726 6V33/EVV
R715 1K/J6
Q704 2SB709A-QRTX
R716 1K/J6
R720 1M/J6
R721 1M/J6
Q705 2SK198-RTX
R722 100/J6
C731 0.1/UBN
R723 10K/J6
C728 0.1/UBN
R717 100/J6
C729 PAT/UN
L704 VLQ0133J821
R724 2200/J6
C732 330P/UN
C733 47P/UN
C730 16V47/EVV
R718 390K/J6
R719 150K/J6
CLAMP_Y FROM TBC
A75V_N FROM POWER
IC707 NJM79L05UAT2
C737 0.1/UFN
C708 0.1/UFN
C707 6V33/EVV
C735 0.1/UFN
C734 6V33/EVV
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

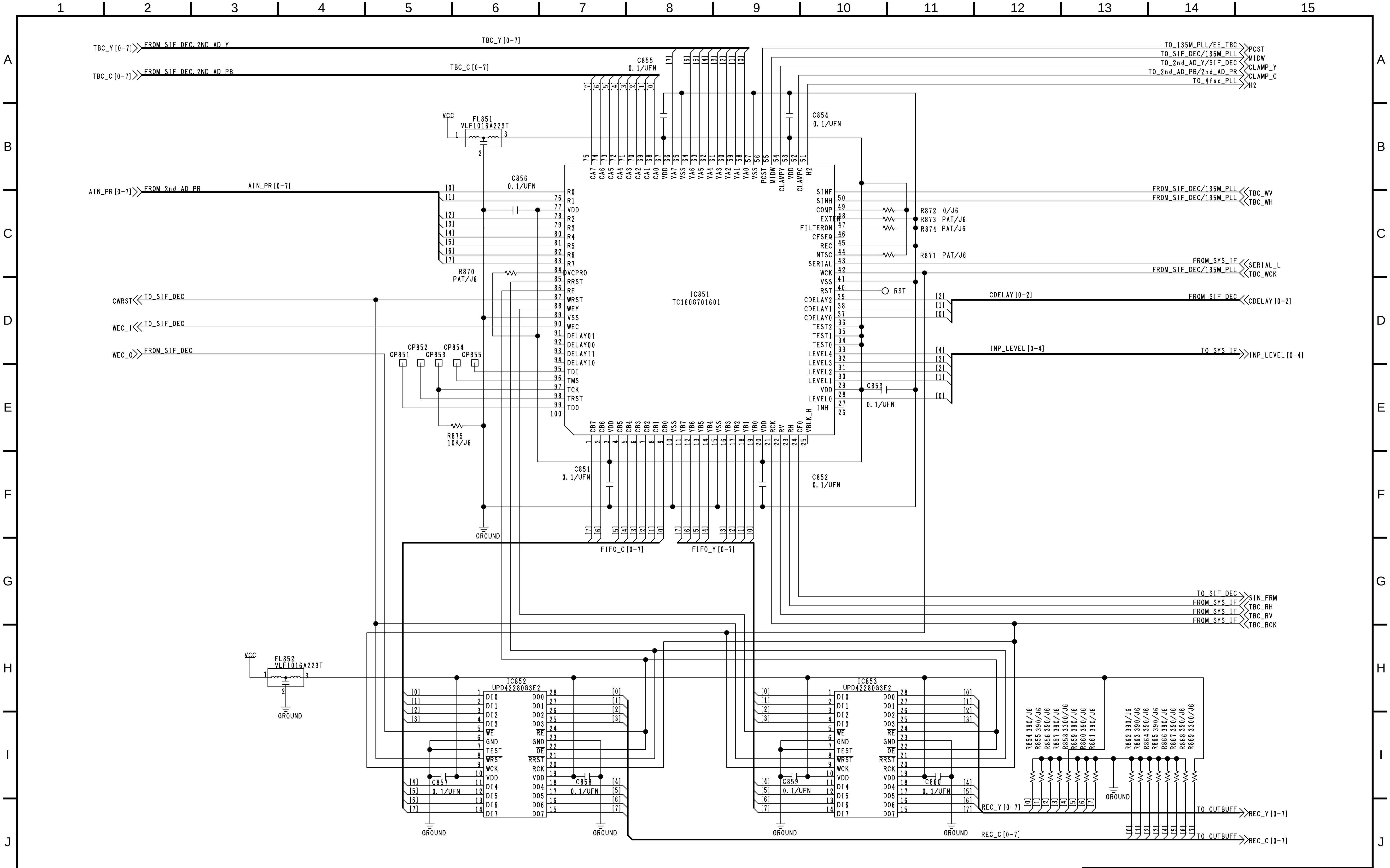
COMPONENT NAME	V IN FOR NTSC (2nd AD Y)	14/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM106	


A12V_P FROM_POWER
IC758 AN78N09
C766 0.1/UFN
AGROUND
A75V_P FROM_POWER
A75V_N FROM_POWER
CLAMP_C FROM_TBC
COMPONENT_L FROM_SYS_IF
CMPNT_PB FROM_M2_BCAM
CMPST_PB FROM_C_DEM
IC751 MC74HC4053FR
IC756 NJM78L05UAT2
IC757 NJM79L05UAT2
C786 0.1/UFN
C787 0.1/UFN
C754 0.1/UFN
C753 6V33/EVV
C758 0.1/UFN
C757 6V33/EVV
C772 6V33/EVV
C773 0.1/UFN
C774 6V33/EVV
C775 0.1/UFN
R781 6800/J6
C792 16V10/EVV
R751 10K/J6
Q751 2SD601A-QRTX
R776 470/J6
R752 1500/J6
R782 27K/J6
FL752 PAT
FL751 VLF1295-1
R754 1500/J6
C751 0.1/UFN
C752 6V33/EVV
C790 8P/UN
R778 560/J6
VR751 1000/VR7
Q752 2SB709A-QRTX
R753 470/J6
C791 47P/UN
R777 1500/J6
PB_TMG
Q756 2SD601A-QRTX
R779 1500/J6
C756 0.1/UFN
C755 6V33/EVV
VR753 1000/VR7
R780 560/J6
PB_LEV
C759 0.1/UFN
IC752 AD848JR-R
C760 PAT/UN
R757 100/RE
R775 2700/J6
C761 PAT/UN
R758 390/J6
R759 PAT/J6
C762 0.1/UFN
Q753 2SD601A-QRTX
R762 100/J6
IC753 NJM084M-T1
R761 1200/J6
R783 PAT/J6
VR754 PAT/VR7
QR751 PAT
FROM_SIF_DEC SETUP_CUT_H
PB_OFS
R764 12K/J6
VR752 5K/VR7
C763 0.1/UFN
R763 12K/J6
VIN_VBLK_SETUP 8
VIN_VBLK_SETUP 7A
IC755 NJM78L05UAT2
C771 0.1/UFN
C770 0.1/UFN
C769 6V33/EVV
TP751 PAT
D751 MA152K-TX
D752 MA152K-TX
IC754 MB40568PF-TF
VCCD VCCA VINC VOUTC VCLMP VINA VRM VREF VRB VCCA VCCD A.GND
AGND D.GND CLK D1(M) D2 D3 D4 D5 D6 D7 D8(L) D.GND
C764 0.1/UFN
C765 0.1/UFN
FROM_135M_PLL ADCK_PB
FROM_SIF_DEC KILL_H
FROM_135M_PLL SERIAL_H
IC759 T74HCT541AF1
VCC
R784 1000/J6
TO_TBC/EE_TBC
TBC_C[0-7]
R791 R790 R789 R788 R787 R786 R785 1000/J6
C768 0.1/UFN
R765 1K/J6
Q754 2SB709A-QRTX
C777 0.1/UFN
C776 16V10/EVV
C778 0.1/UBN
C779 PAT/UN
R767 100/J6
R766 1K/J6
R770 1M/J6
R771 1M/J6
R772 100/J6
Q755 2SK198-RTX
C781 0.1/UBN
R773 10K/J6
L754 VLQ0133J821
C782 330P/UN
R774 2200/J6
C783 47P/UN
C780 16V47/EVV
R768 390K/J6
R769 270K/J6
C785 0.1/UFN
C784 6V33/EVV

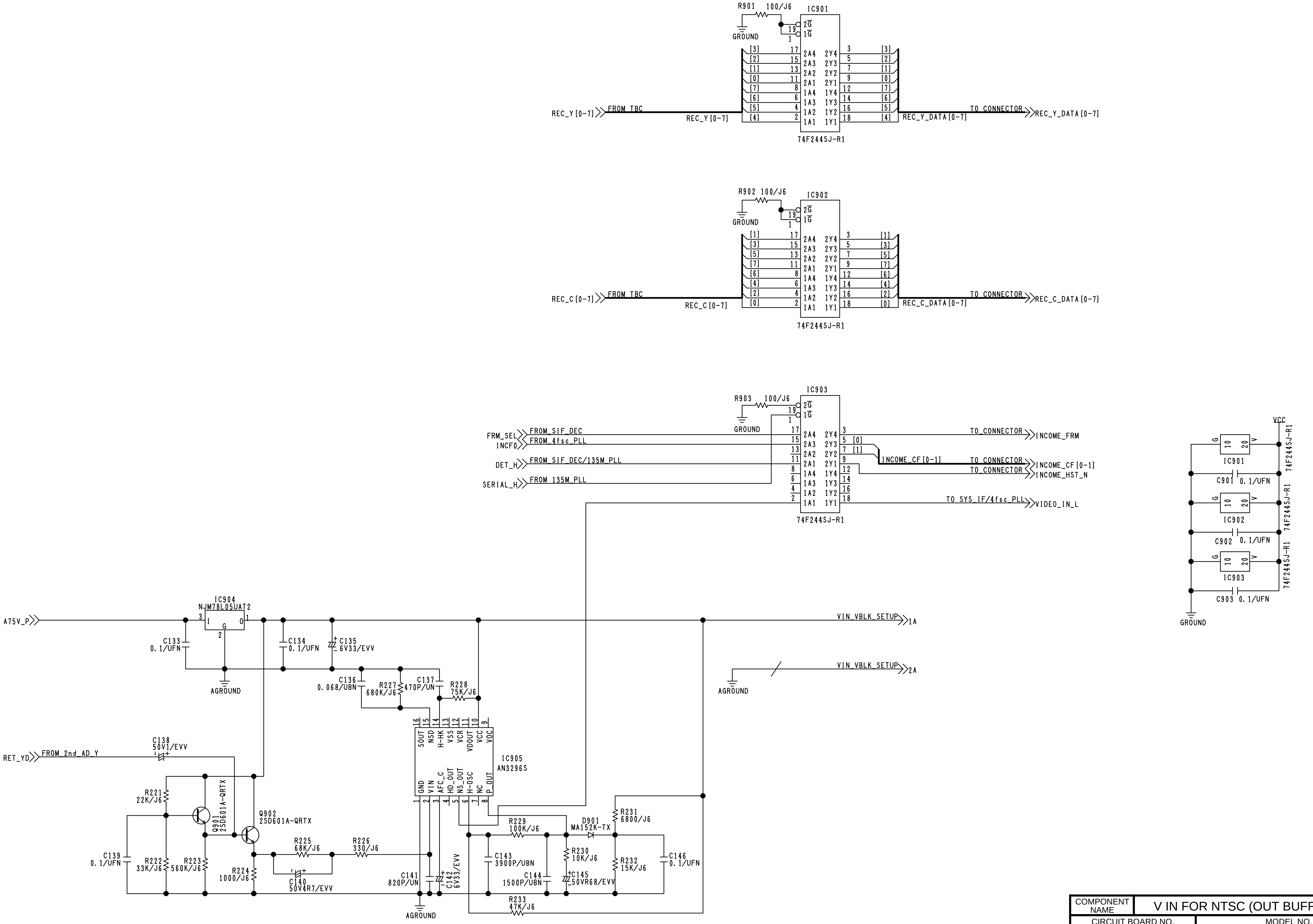
COMPONENT NAME	V IN FOR NTSC (2nd AD PB)	15/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM107	


A12V_P FROM_POWER
IC808 AN78N09
C816 0.1/UFN
AGROUND
IC805 NJM78L05UAT2
C820 0.1/UFN
C819 6V33/EVV
C821 0.1/UFN
VIN_VBLK_SETUP 9A
FROM_135M_PLL ADCK_PR
FROM_SIF_DEC KILL_H
FROM_135M_PLL SERIAL_H
R831 6800/J6
C842 16V10/EVV
Q801 2SD601A-QRTX
R801 10K/J6
R802 1500/J6
R832 27K/J6
FL802 PAT
FL801 VLF1295-1
R826 470/J6
R804 1500/J6
C801 0.1/UFN
C802 6V33/EVV
C840 8P/UN
R828 560/J6
VR801 1000/VR7
Q802 2SB709A-QRTX
PR_TMG
R803 470/J6
C841 47P/UN
R827 1500/J6
Q806 2SD601A-QRTX
R829 1500/J6
VR803 1000/VR7
C809 0.1/UFN
PR_LEV
IC802 AD848JR-R
R807 100/RE
R830 560/J6
C810 PAT/UN
R825 2700/J6
C806 0.1/UFN
C805 6V33/EVV
R808 390/J6
C811 PAT/UN
R809 PAT/J6
C812 0.1/UFN
TP801 VJR0646
D801 MA152K-TX
D802 MA152K-TX
IC804 MB40568PF-TF
VCCD VCCA VINC VOUTC VCLMP VINA VRM VREF VRB VCCA VCCD A.GND
AGND D.GND CLK D1(M) D2 D3 D4 D5 D6 D7 D8(L) D.GND
C814 0.1/UFN
C815 0.1/UFN
IC809 T74HCT541AF1
VCC
R834 1000/J6
TO_TBC/EE_TBC
AIN_PR[0-7]
R841 R840 R839 R838 R837 R836 R835 1000/J6
PR_OFS
R814 12K/J6
VR802 5K/VR7
R813 12K/J6
C813 0.1/UFN
R812 100/J6
Q803 2SD601A-QRTX
IC803 NJM084M-T1
R811 1200/J6
R833 PAT/J6
VR804 PAT/VR7
QR801 PAT
FROM_SIF_DEC SETUP_CUT_H
VIN_VBLK_SETUP 10
C818 0.1/UFN
IC809 T74HCT541AF1
COMPONENT_L FROM_SYS_IF
CMPNT_PR FROM_M2_BCAM
CMPST_PR FROM_C_DEM
IC801 MC74HC4053FR
C822 6V33/EVV
C823 0.1/UFN
C824 6V33/EVV
C825 0.1/UFN
VDD VEE VSS
A75V_P FROM_POWER
IC806 NJM78L05UAT2
C836 0.1/UFN
C804 0.1/UFN
C803 6V33/EVV
C827 0.1/UFN
C826 16V10/EVV
R815 1K/J6
Q804 2SB709A-QRTX
R816 1K/J6
R820 1M/J6
R821 1M/J6
Q805 2SK198-RTX
R822 100/J6
R823 10K/J6
C831 0.1/UBN
C828 0.1/UBN
R817 100/J6
C829 PAT/UG
L804 VLQ0133J821
R824 2200/J6
C832 330P/UN
C833 47P/UN
CLAMP_C FROM_TBC
C830 16V47/EVV
R818 390K/J6
R819 270K/J6
A75V_N FROM_POWER
IC807 NJM79L05UAT2
C837 0.1/UFN
C808 0.1/UFN
C807 6V33/EVV
C835 0.1/UFN
C834 6V33/EVV

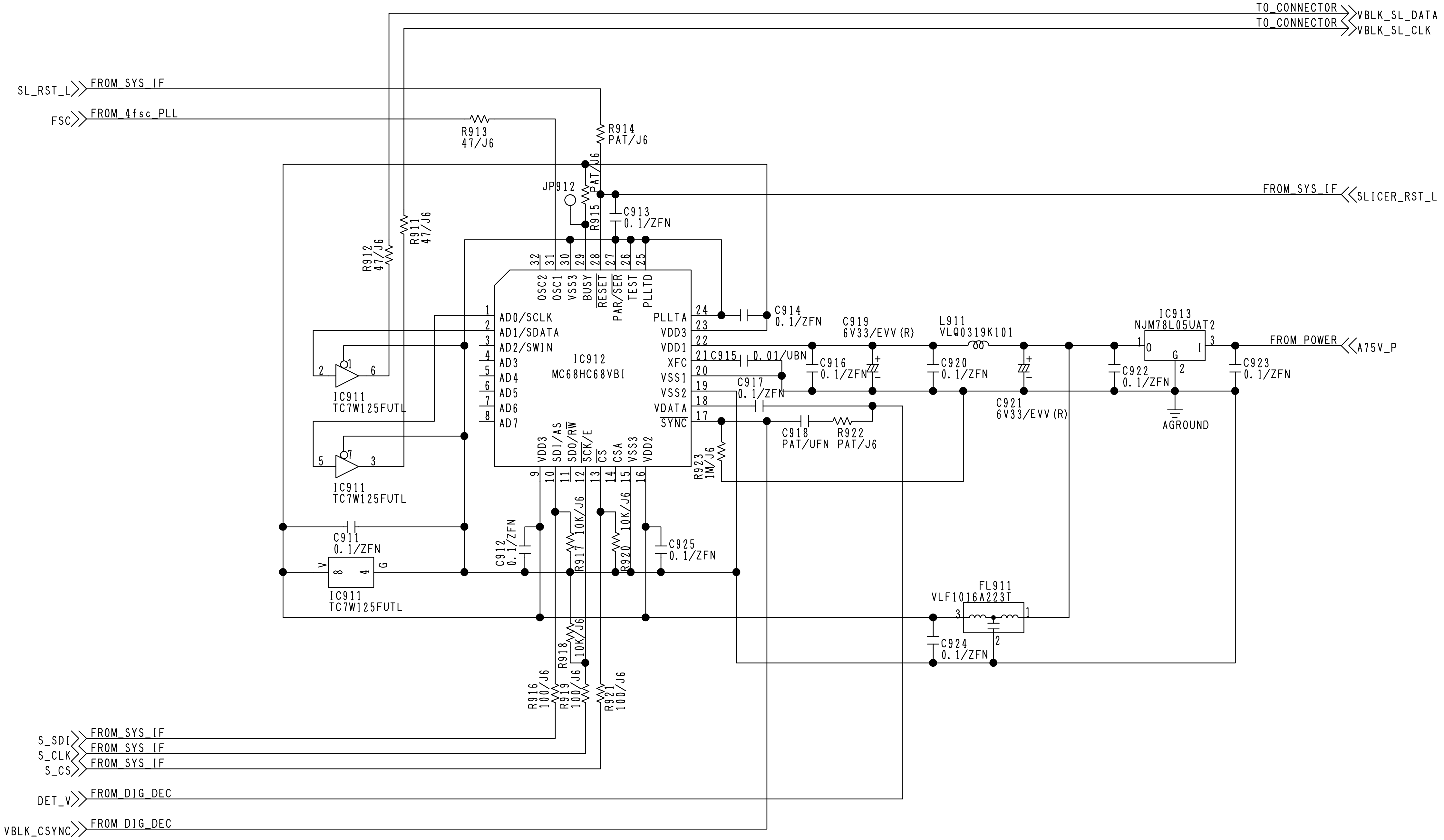
COMPONENT NAME	V IN FOR NTSC (2nd AD PR)	16/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM108	


TBC_Y[0-7]
FROM SIF DEC 2ND AD Y
TBC_C[0-7]
FROM SIF DEC 2ND AD PB
C855
0.1/UFN
C854
0.1/UFN
VCC
FL851
VLF1016A223T
AIN_PR[0-7]
FROM 2nd AD PR
C856
0.1/UFN
R870
PAT/J6
CWRST
TO SIF DEC
WEC_I
TO SIF DEC
WEC_O
FROM SIF DEC
CP851
CP852
CP853
CP854
CP855
R875
10K/J6
GROUND
IC851
TC160G70I601
R0
R1
VDD
R2
R3
R4
R5
R6
R7
DVCPRO
RRST
RE
WRST
WEY
VSS
WEC
DELAY01
DELAY00
DELAYI1
DELAYI0
TDI
TMS
TCK
TRST
TDO
SINF
SINH
COMP
EXTEN
FILTERON
CFSEQ
REC
NTSC
SERIAL
WCK
VSS
RST
CDELAY2
CDELAY1
CDELAY0
TEST2
TEST1
TEST0
LEVEL4
LEVEL3
LEVEL2
LEVEL1
VDD
LEVEL0
INH
R872 0/J6
R873 PAT/J6
R874 PAT/J6
R871 PAT/J6
C853
0.1/UFN
TO 135M PLL/EE TBC
PCST
TO SIF DEC/135M PLL
MIDW
TO 2nd AD Y/SIF DEC
CLAMP_Y
TO 2nd AD PB/2nd AD PR
CLAMP_C
TO 4fsc PLL
H2
FROM SIF DEC/135M PLL
TBC_WV
FROM SIF DEC/135M PLL
TBC_WH
FROM SYS IF
SERIAL_L
FROM SIF DEC/135M PLL
TBC_WCK
CDELAY[0-2]
FROM SIF DEC
CDELAY[0-2]
INP_LEVEL[0-4]
TO SYS IF
INP_LEVEL[0-4]
C851
0.1/UFN
C852
0.1/UFN
FIFO_C[0-7]
FIFO_Y[0-7]
TO SIF DEC
SIN_FRM
FROM SYS IF
TBC_RH
FROM SYS IF
TBC_RV
FROM SYS IF
TBC_RCK
VCC
FL852
VLF1016A223T
IC852
UPD42280G3E2
IC853
UPD42280G3E2
DI0
DI1
DI2
DI3
WE
GND
TEST
WRST
WCK
VDD
DI4
DI5
DI6
DI7
DO0
DO1
DO2
DO3
RE
GND
OE
RRST
RCK
VDD
DO4
DO5
DO6
DO7
C857
0.1/UFN
C858
0.1/UFN
C859
0.1/UFN
C860
0.1/UFN
R854 390/J6
R855 390/J6
R856 390/J6
R857 390/J6
R858 3300/J6
R859 390/J6
R860 390/J6
R861 390/J6
R862 390/J6
R863 390/J6
R864 390/J6
R865 390/J6
R866 390/J6
R867 390/J6
R868 390/J6
R869 3300/J6
REC_Y[0-7]
TO OUTBUFF
REC_Y[0-7]
REC_C[0-7]
TO OUTBUFF
REC_C[0-7]

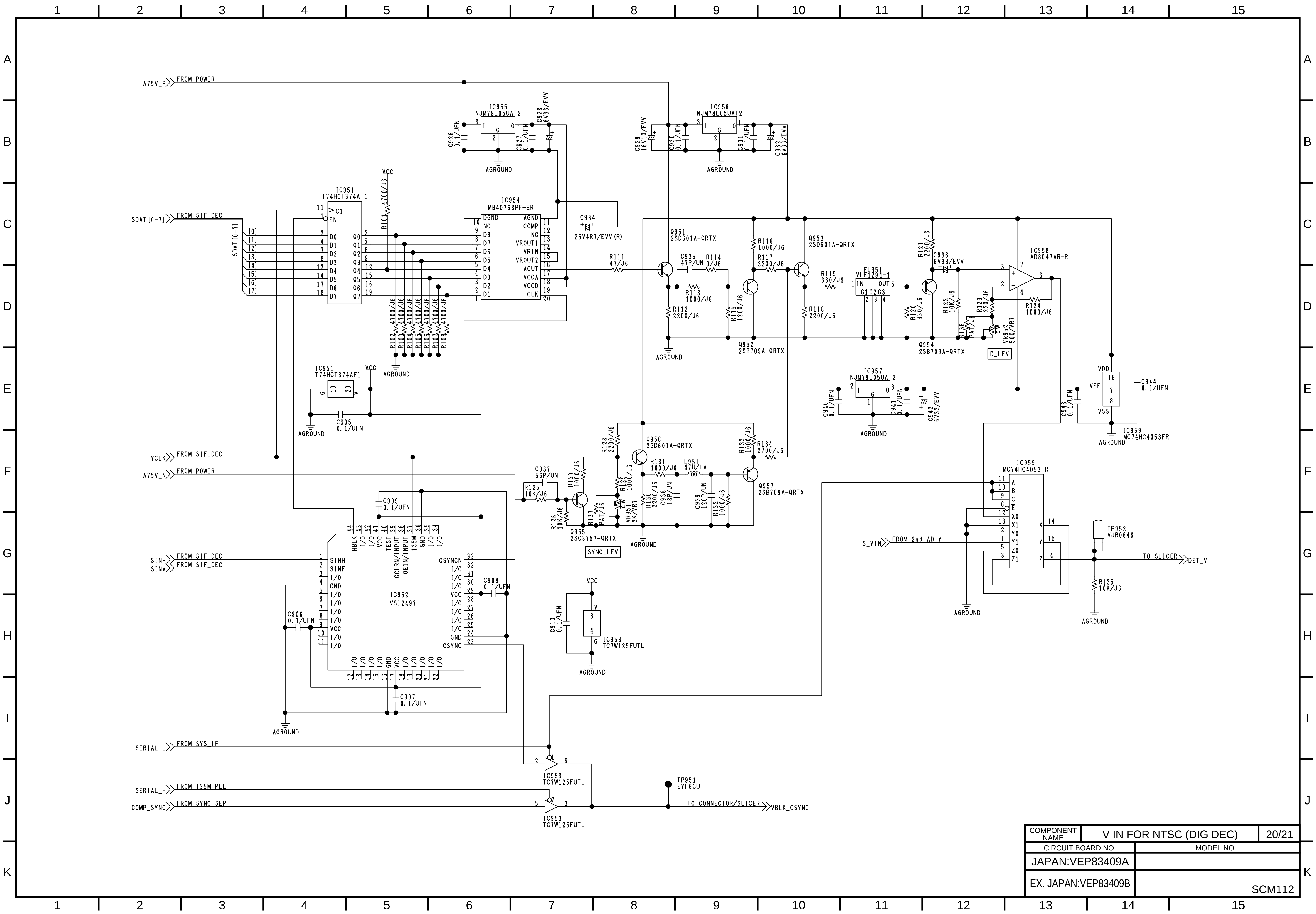
COMPONENT NAME	V IN FOR NTSC (TBC)	17/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM109	


R901 100/J6
IC901
GROUND
2G
1G
19
1
2A4 2A3 2A2 2A1 1A4 1A3 1A2 1A1
2Y4 2Y3 2Y2 2Y1 1Y4 1Y3 1Y2 1Y1
REC_Y[0-7]
FROM TBC
REC_Y[0-7]
REC_Y_DATA[0-7]
TO CONNECTOR
REC_Y_DATA[0-7]
74F244SJ-R1
R902 100/J6
IC902
REC_C[0-7]
FROM TBC
REC_C[0-7]
REC_C_DATA[0-7]
TO CONNECTOR
REC_C_DATA[0-7]
74F244SJ-R1
R903 100/J6
IC903
FRM_SEL
FROM SIF_DEC
INCF0
FROM 4fsc PLL
DET_H
FROM SIF_DEC/135M_PLL
SERIAL_H
FROM 135M_PLL
TO CONNECTOR
INCOME_FRM
INCOME_CF[0-1]
TO CONNECTOR
INCOME_CF[0-1]
TO CONNECTOR
INCOME_HST_N
TO SYS_IF/4fsc_PLL
VIDEO_IN_L
74F244SJ-R1
VCC
IC901 74F244SJ-R1
C901 0.1/UFN
IC902 74F244SJ-R1
C902 0.1/UFN
IC903 74F244SJ-R1
C903 0.1/UFN
GROUND
A75V_P
IC904
NJM78L05UAT2
C133 0.1/UFN
C134 0.1/UFN
C135 6V33/EVV
AGROUND
VIN_VBLK_SETUP
1A
VIN_VBLK_SETUP
2A
AGROUND
C136 0.068/UBN
R227 680K/J6
C137 470P/UN
R228 75K/J6
SOUT NSD H-HK VSS VCR VDOUT VCC VOC
IC905
AN3296S
GND VIN AFC_C HD_OUT NS_OUT H-OSC NC P_OUT
RET_YD
FROM 2nd AD Y
C138 50V1/EVV
R221 22K/J6
Q901 2SD601A-QRTX
Q902 2SD601A-QRTX
C139 0.1/UFN
R222 33K/J6
R223 560K/J6
R224 1000/J6
R225 68K/J6
C140 50V4R7/EVV
R226 330/J6
C141 820P/UN
C142 6V33/EVV
AGROUND
R229 100K/J6
D901 MA152K-TX
R231 6800/J6
C143 3900P/UBN
C144 1500P/UBN
R230 10K/J6
C145 50VR68/EVV
R232 15K/J6
C146 0.1/UFN
R233 47K/J6

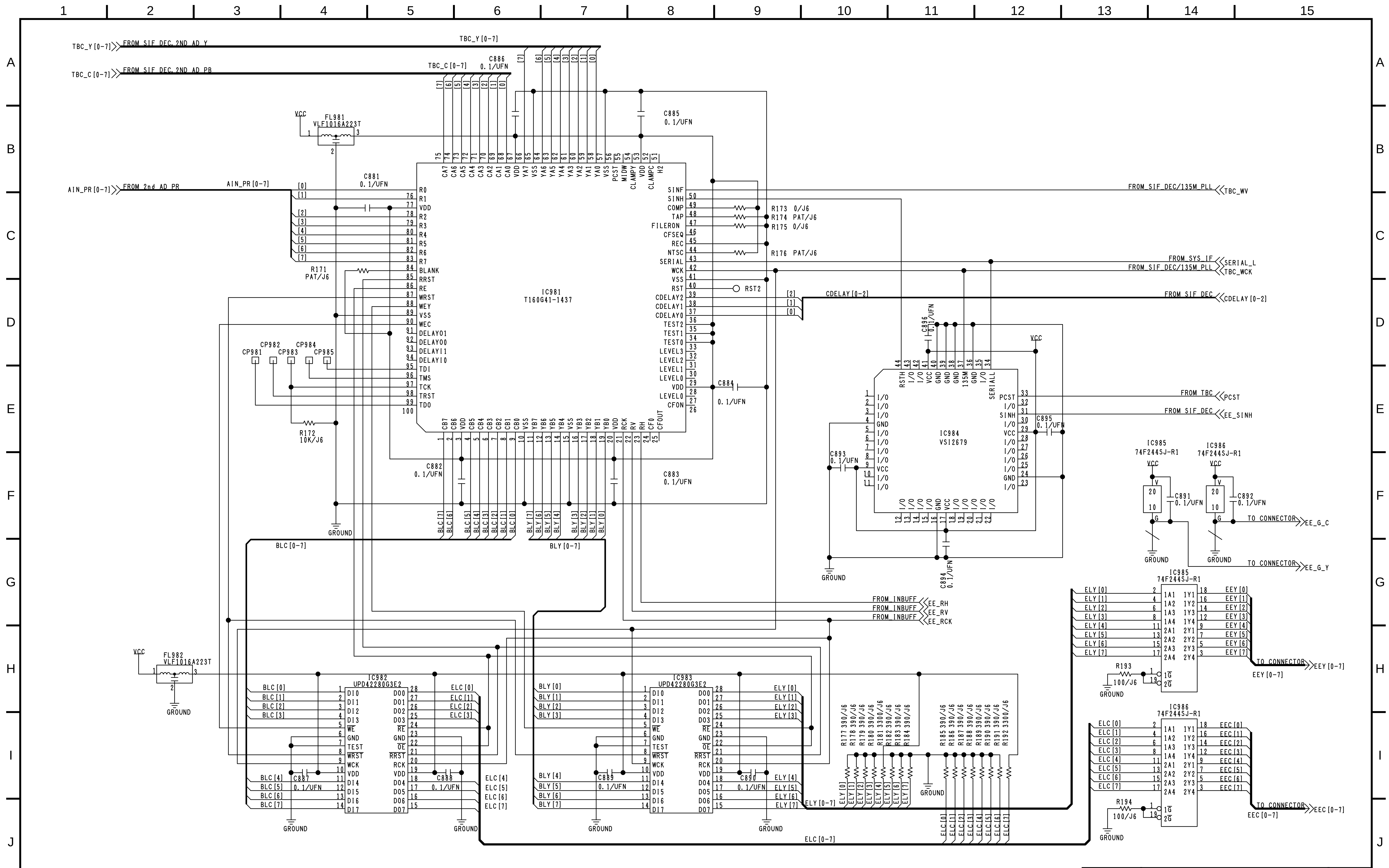
COMPONENT NAME	V IN FOR NTSC (OUT BUFF)	18/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM110	


TO_CONNECTOR
VBLK_SL_DATA
TO_CONNECTOR
VBLK_SL_CLK
SL_RST_L
FROM_SYS_IF
FSC
FROM_4fsc_PLL
R913
47/J6
R914
PAT/J6
JP912
R915
PAT/J6
C913
0.1/ZFN
FROM_SYS_IF
SLICER_RST_L
R912
47/J6
R911
47/J6
IC912
MC68HC68VBI
OSC2
OSC1
VSS3
BUSY
RESET
PAR/SER
TEST
PLLTD
AD0/SCLK
AD1/SDATA
AD2/SWIN
AD3
AD4
AD5
AD6
AD7
PLLTA
VDD3
VDD1
XFC
VSS1
VSS2
VDATA
SYNC
VDD3
SDI/AS
SDO/RW
SCK/E
CS
CSA
VSS3
VDD2
C914
0.1/ZFN
C915
0.01/UBN
C916
0.1/ZFN
C917
0.1/ZFN
C918
PAT/UFN
R922
PAT/J6
R923
1M/J6
C919
6V33/EVV(R)
L911
VLQ0319K101
C920
0.1/ZFN
C921
6V33/EVV(R)
IC913
NJM78L05UAT2
O
G
I
C922
0.1/ZFN
C923
0.1/ZFN
AGROUND
FROM_POWER
A75V_P
IC911
TC7W125FUTL
IC911
TC7W125FUTL
C911
0.1/ZFN
IC911
TC7W125FUTL
C912
0.1/ZFN
R917
10K/J6
R920
10K/J6
C925
0.1/ZFN
FL911
VLF1016A223T
C924
0.1/ZFN
R918
10K/J6
R916
100/J6
R919
100/J6
R921
100/J6
S_SDI
FROM_SYS_IF
S_CLK
FROM_SYS_IF
S_CS
FROM_SYS_IF
DET_V
FROM_DIG_DEC
VBLK_CSYNC
FROM_DIG_DEC

COMPONENT NAME	V IN FOR NTSC (SLICER)	19/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B		SCM111

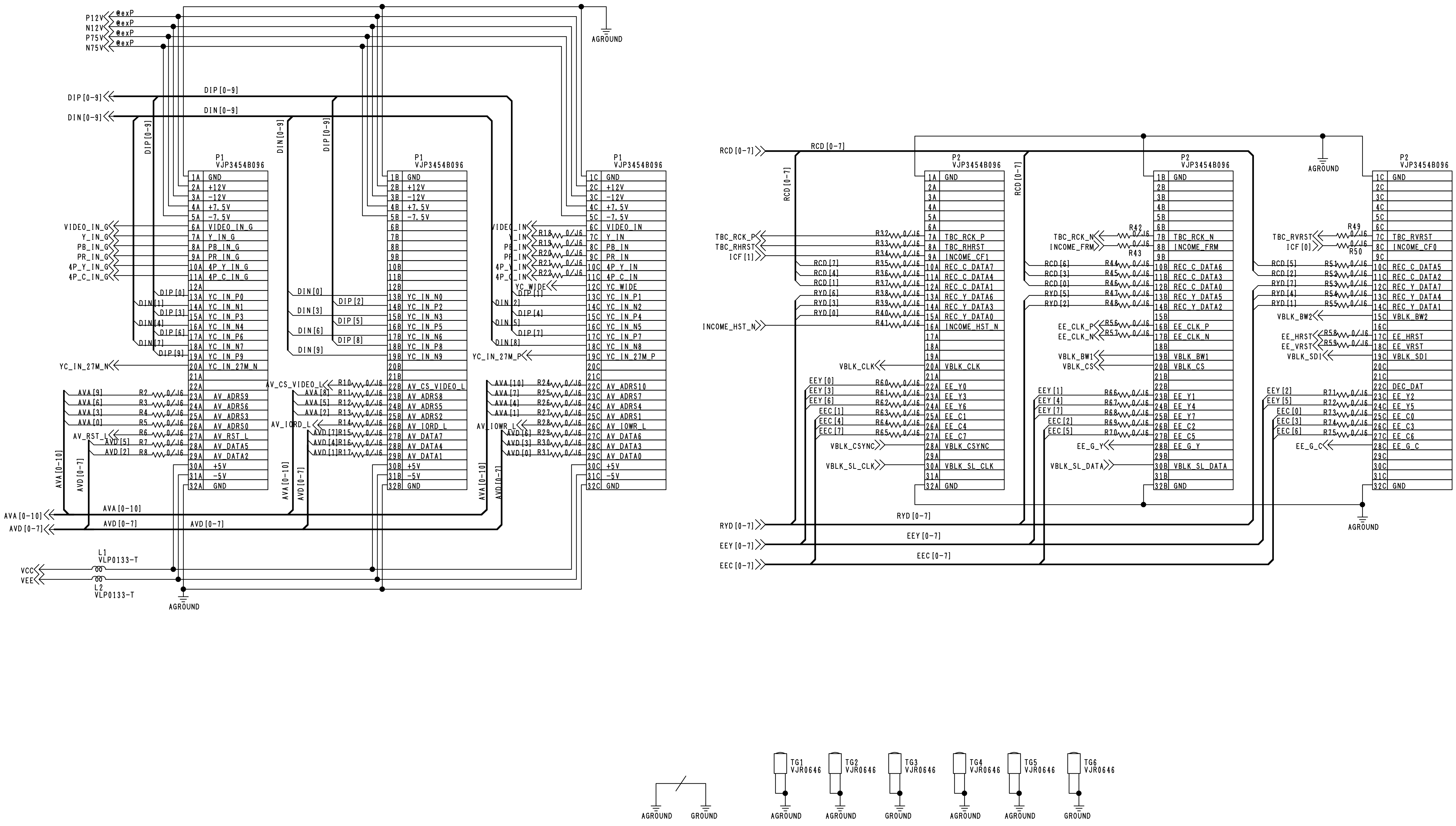

A75V_P FROM POWER
SDAT[0-7] FROM SIF_DEC
YCLK FROM SIF_DEC
A75V_N FROM POWER
SINH FROM SIF_DEC
SINV FROM SIF_DEC
SERIAL_L FROM SYS_IF
SERIAL_H FROM 135M_PLL
COMP_SYNC FROM SYNC_SEP
TO CONNECTOR/SLICER VBLK_CSYNC
S_VIN FROM 2nd_AD_Y
TO SLICER DET_V
IC951 T74HCT374AF1
IC952 VSI2497
IC953 TC7W125FUTL
IC954 MB40768PF-ER
IC955 NJM78L05UAT2
IC956 NJM78L05UAT2
IC957 NJM79L05UAT2
IC958 AD8047AR-R
IC959 MC74HC4053FR
Q951 2SD601A-QRTX
Q952 2SB709A-QRTX
Q953 2SD601A-QRTX
Q954 2SB709A-QRTX
Q955 2SC3757-QRTX
Q956 2SD601A-QRTX
Q957 2SB709A-QRTX
FL951 VLF1294-1
L951 470/LA
VR951 2K/VR7
VR952 500/VR7
TP951 EYF6CU
TP952 VJR0646
SYNC_LEV
D_LEV
AGROUND
VCC
C934 25V4R7/EVV(R)
R111 47/J6
R135 10K/J6

COMPONENT NAME	V IN FOR NTSC (DIG DEC)	20/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B	SCM112	

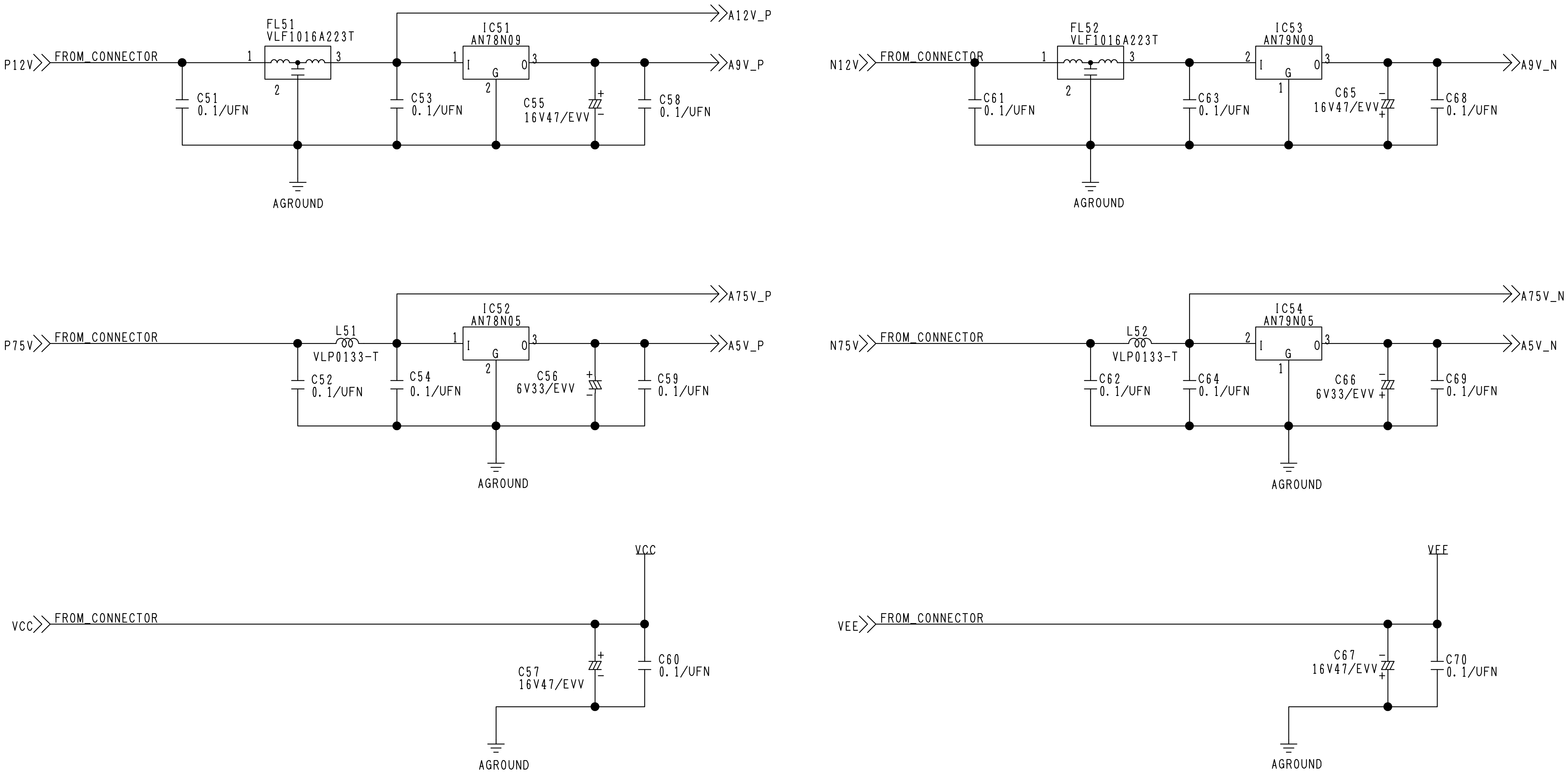

TBC_Y[0-7] FROM SIF DEC.2ND AD Y
TBC_C[0-7] FROM SIF DEC.2ND AD PB
AIN_PR[0-7] FROM 2nd AD PR
FL981 VLF1016A223T
FL982 VLF1016A223T
VCC
GROUND
C881 0.1/UFN
C882 0.1/UFN
C883 0.1/UFN
C884 0.1/UFN
C885 0.1/UFN
C886 0.1/UFN
IC981 T160G41-1437
R171 PAT/J6
R172 10K/J6
R173 0/J6
R174 PAT/J6
R175 0/J6
R176 PAT/J6
CP981 CP982 CP983 CP984 CP985
RST2
FROM SIF DEC/135M PLL TBC_WV
FROM SYS IF SERIAL_L
FROM SIF DEC/135M PLL TBC_WCK
CDELAY[0-2] FROM SIF DEC CDELAY[0-2]
IC984 VS12679
C893 0.1/UFN
C894 0.1/UFN
C895 0.1/UFN
C896 0.1/UFN
FROM TBC PCST
FROM SIF DEC EE_SINH
IC985 74F244SJ-R1
IC986 74F244SJ-R1
C891 0.1/UFN
C892 0.1/UFN
TO CONNECTOR EE_G_C
TO CONNECTOR EE_G_Y
FROM INBUFF EE_RH
FROM INBUFF EE_RV
FROM INBUFF EE_RCK
BLC[0-7]
BLY[0-7]
IC982 UPD42280G3E2
IC983 UPD42280G3E2
C887 0.1/UFN
C888 0.1/UFN
C889 0.1/UFN
C890 0.1/UFN
R177-R184 390/J6, R181 3300/J6
R185-R191 390/J6, R192 3300/J6
ELY[0-7]
ELC[0-7]
R193 100/J6
R194 100/J6
TO CONNECTOR EEY[0-7]
TO CONNECTOR EEC[0-7]

COMPONENT NAME	V IN FOR NTSC (EE TBC)	21/21
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP83409A		
EX. JAPAN:VEP83409B		

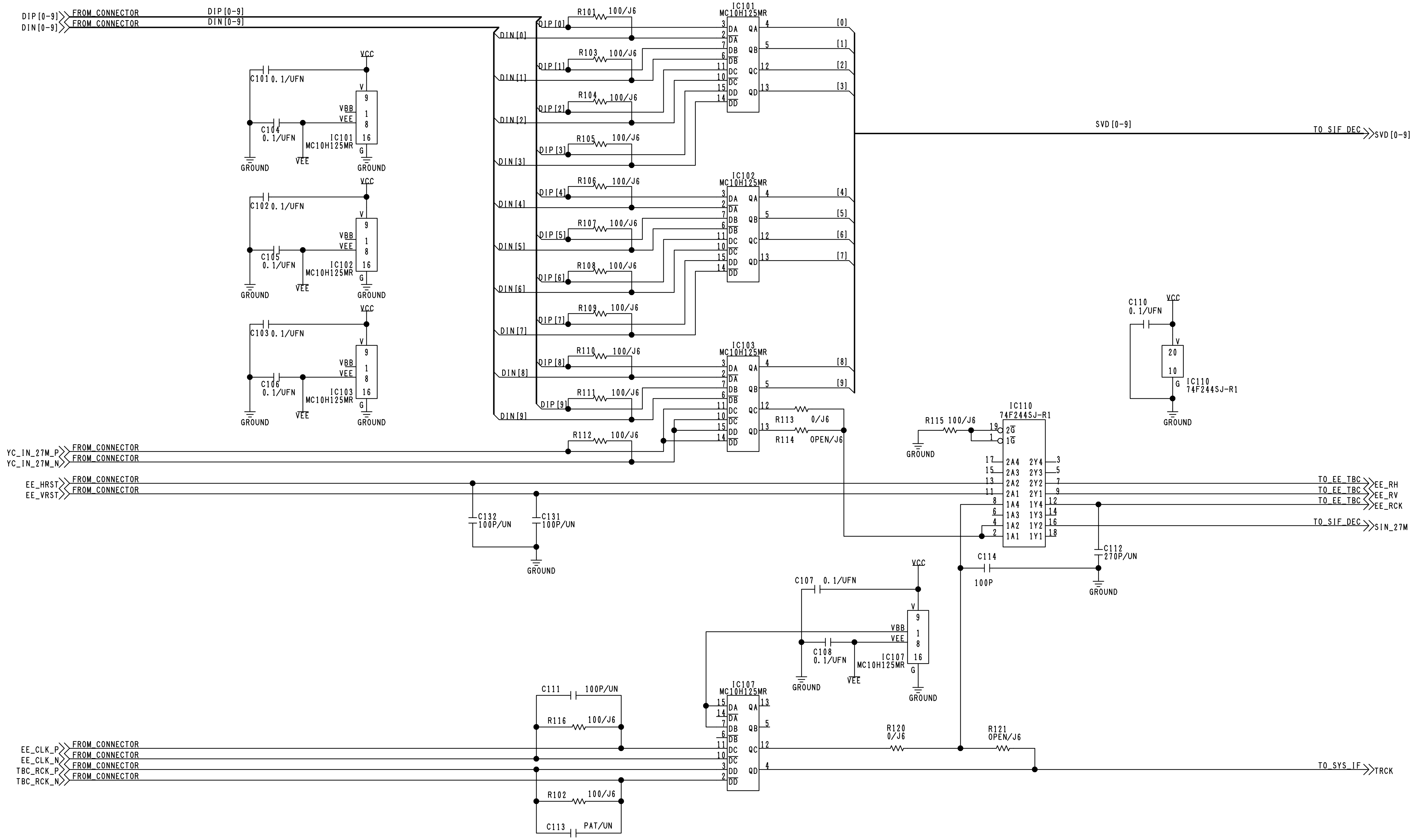
SCM113


P12V
N12V
P75V
N75V
@exP
AGROUND
DIP[0-9]
DIN[0-9]
P1
VJP3454B096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A VIDEO_IN_G
7A Y_IN_G
8A PB_IN_G
9A PR_IN_G
10A 4P_Y_IN_G
11A 4P_C_IN_G
13A YC_IN_P0
14A YC_IN_N1
15A YC_IN_P3
16A YC_IN_N4
17A YC_IN_P6
18A YC_IN_N7
19A YC_IN_P9
20A YC_IN_27M_N
23A AV_ADRS9
24A AV_ADRS6
25A AV_ADRS3
26A AV_ADRS0
27A AV_RST_L
28A AV_DATA5
29A AV_DATA2
30A +5V
31A -5V
32A GND
VIDEO_IN_G
Y_IN_G
PB_IN_G
PR_IN_G
4P_Y_IN_G
4P_C_IN_G
YC_IN_27M_N
AVA[9] R2 0/J6
AVA[6] R3 0/J6
AVA[3] R4 0/J6
AVA[0] R5 0/J6
AV_RST_L R6 0/J6
AVD[5] R7 0/J6
AVD[2] R8 0/J6
AVA[0-10]
AVD[0-7]
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
13B YC_IN_N0
14B YC_IN_P2
15B YC_IN_N3
16B YC_IN_P5
17B YC_IN_N6
18B YC_IN_P8
19B YC_IN_N9
22B AV_CS_VIDEO_L
23B AV_ADRS8
24B AV_ADRS5
25B AV_ADRS2
26B AV_IORD_L
27B AV_DATA7
28B AV_DATA4
29B AV_DATA1
30B +5V
31B -5V
32B GND
AV_CS_VIDEO_L R10 0/J6
AVA[8] R11 0/J6
AVA[5] R12 0/J6
AVA[2] R13 0/J6
AV_IORD_L R14 0/J6
AVD[7] R15 0/J6
AVD[4] R16 0/J6
AVD[1] R17 0/J6
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C VIDEO_IN
7C Y_IN
8C PB_IN
9C PR_IN
10C 4P_Y_IN
11C 4P_C_IN
12C YC_WIDE
13C YC_IN_P1
14C YC_IN_N2
15C YC_IN_P4
16C YC_IN_N5
17C YC_IN_P7
18C YC_IN_N8
19C YC_IN_27M_P
22C AV_ADRS10
23C AV_ADRS7
24C AV_ADRS4
25C AV_ADRS1
26C AV_IOWR_L
27C AV_DATA6
28C AV_DATA3
29C AV_DATA0
30C +5V
31C -5V
32C GND
VIDEO_IN R18 0/J6
Y_IN R19 0/J6
PB_IN R20 0/J6
PR_IN R21 0/J6
4P_Y_IN R22 0/J6
4P_C_IN R23 0/J6
YC_WIDE
YC_IN_27M_P
AVA[10] R24 0/J6
AVA[7] R25 0/J6
AVA[4] R26 0/J6
AVA[1] R27 0/J6
AV_IOWR_L R28 0/J6
AVD[6] R29 0/J6
AVD[3] R30 0/J6
AVD[0] R31 0/J6
VCC
VEE
L1 VLP0133-T
L2 VLP0133-T
RCD[0-7]
RYD[0-7]
EEY[0-7]
EEC[0-7]
P2
VJP3454B096
TBC_RCK_P R32 0/J6
TBC_RHRST R33 0/J6
ICF[1] R34 0/J6
RCD[7] R35 0/J6
RCD[4] R36 0/J6
RCD[1] R37 0/J6
RYD[6] R38 0/J6
RYD[3] R39 0/J6
RYD[0] R40 0/J6
INCOME_HST_N R41 0/J6
1A GND
7A TBC_RCK_P
8A TBC_RHRST
9A INCOME_CF1
10A REC_C_DATA7
11A REC_C_DATA4
12A REC_C_DATA1
13A REC_Y_DATA6
14A REC_Y_DATA3
15A REC_Y_DATA0
16A INCOME_HST_N
20A VBLK_CLK
22A EE_Y0
23A EE_Y3
24A EE_Y6
25A EE_C1
26A EE_C4
27A EE_C7
28A VBLK_CSYNC
30A VBLK_SL_CLK
32A GND
VBLK_CLK
EEY[0] R60 0/J6
EEY[3] R61 0/J6
EEY[6] R62 0/J6
EEC[1] R63 0/J6
EEC[4] R64 0/J6
EEC[7] R65 0/J6
VBLK_CSYNC
VBLK_SL_CLK
TBC_RCK_N R42 0/J6
INCOME_FRM R43 0/J6
RCD[6] R44 0/J6
RCD[3] R45 0/J6
RCD[0] R46 0/J6
RYD[5] R47 0/J6
RYD[2] R48 0/J6
EE_CLK_P R56 0/J6
EE_CLK_N R57 0/J6
VBLK_BW1
VBLK_CS
1B GND
7B TBC_RCK_N
8B INCOME_FRM
10B REC_C_DATA6
11B REC_C_DATA3
12B REC_C_DATA0
13B REC_Y_DATA5
14B REC_Y_DATA2
16B EE_CLK_P
17B EE_CLK_N
19B VBLK_BW1
20B VBLK_CS
23B EE_Y1
24B EE_Y4
25B EE_Y7
26B EE_C2
27B EE_C5
28B EE_G_Y
30B VBLK_SL_DATA
32B GND
EEY[1] R66 0/J6
EEY[4] R67 0/J6
EEY[7] R68 0/J6
EEC[2] R69 0/J6
EEC[5] R70 0/J6
EE_G_Y
VBLK_SL_DATA
TBC_RVRST R49 0/J6
ICF[0] R50 0/J6
RCD[5] R51 0/J6
RCD[2] R52 0/J6
RYD[7] R53 0/J6
RYD[4] R54 0/J6
RYD[1] R55 0/J6
VBLK_BW2
EE_HRST R58 0/J6
EE_VRST R59 0/J6
VBLK_SDI
1C GND
7C TBC_RVRST
8C INCOME_CF0
10C REC_C_DATA5
11C REC_C_DATA2
12C REC_C_DATA0
13C REC_Y_DATA7
14C REC_Y_DATA4
14C REC_Y_DATA1
15C VBLK_BW2
17C EE_HRST
18C EE_VRST
19C VBLK_SDI
22C DEC_DAT
23C EE_Y2
24C EE_Y5
25C EE_C0
26C EE_C3
27C EE_C6
28C EE_G_C
32C GND
EEY[2] R71 0/J6
EEY[5] R72 0/J6
EEC[0] R73 0/J6
EEC[3] R74 0/J6
EEC[6] R75 0/J6
EE_G_C
GROUND
TG1 VJR0646
TG2 VJR0646
TG3 VJR0646
TG4 VJR0646
TG5 VJR0646
TG6 VJR0646

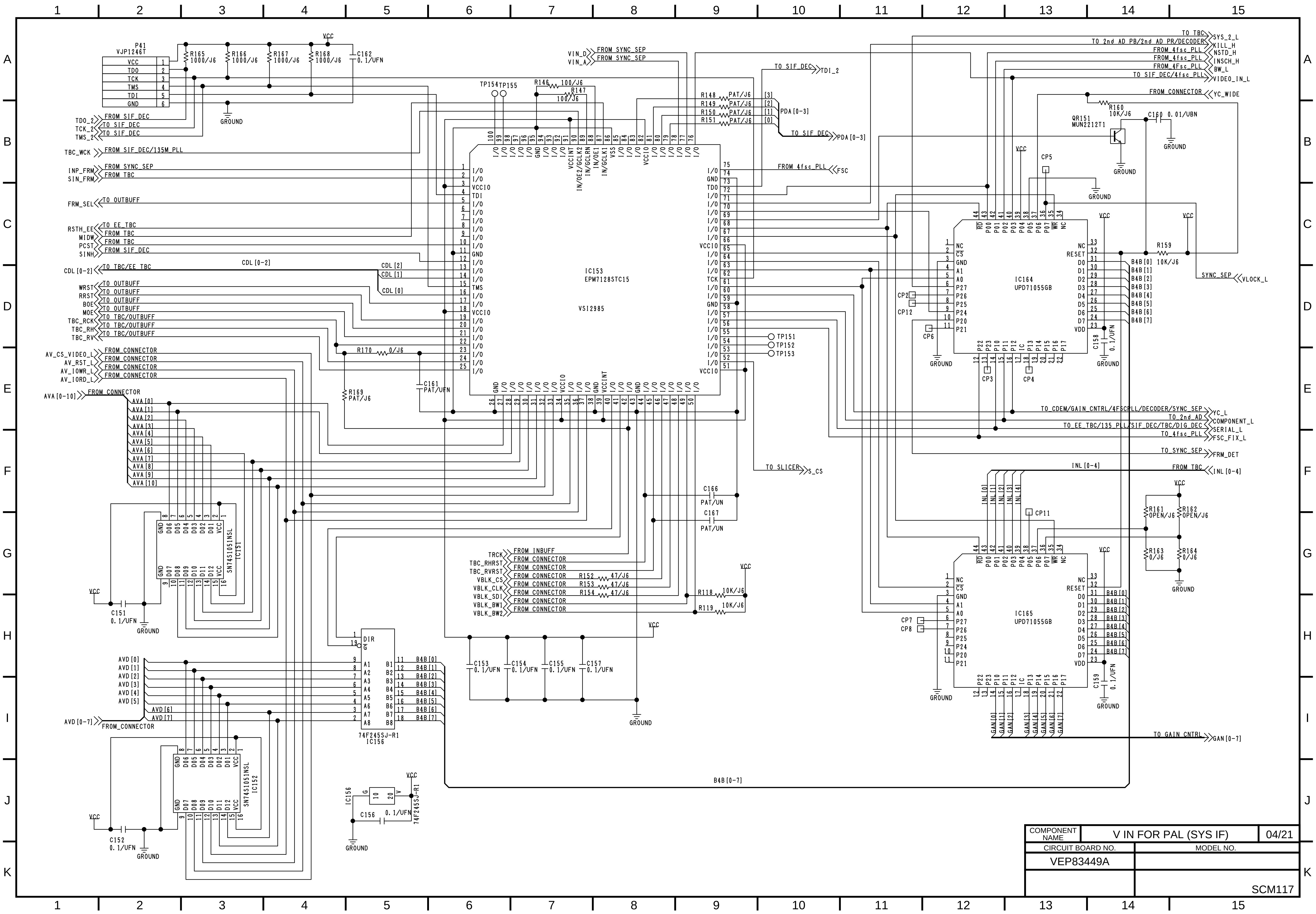
COMPONENT NAME	V IN FOR PAL (CONNECTOR)		01/21
CIRCUIT BOARD NO.		MODEL NO.	
VEP83449A			
		SCM114	


P12V
FROM_CONNECTOR
FL51
VLF1016A223T
1
3
2
C51
0.1/UFN
C53
0.1/UFN
IC51
AN78N09
I
G
O
1
2
3
A12V_P
A9V_P
C55
16V47/EVV
C58
0.1/UFN
AGROUND
N12V
FROM_CONNECTOR
FL52
VLF1016A223T
C61
0.1/UFN
C63
0.1/UFN
IC53
AN79N09
C65
16V47/EVV
C68
0.1/UFN
A9V_N
AGROUND
P75V
FROM_CONNECTOR
L51
VLP0133-T
C52
0.1/UFN
C54
0.1/UFN
IC52
AN78N05
C56
6V33/EVV
C59
0.1/UFN
A75V_P
A5V_P
AGROUND
N75V
FROM_CONNECTOR
L52
VLP0133-T
C62
0.1/UFN
C64
0.1/UFN
IC54
AN79N05
C66
6V33/EVV
C69
0.1/UFN
A75V_N
A5V_N
AGROUND
VCC
FROM_CONNECTOR
VCC
C57
16V47/EVV
C60
0.1/UFN
AGROUND
VEE
FROM_CONNECTOR
VEE
C67
16V47/EVV
C70
0.1/UFN
AGROUND

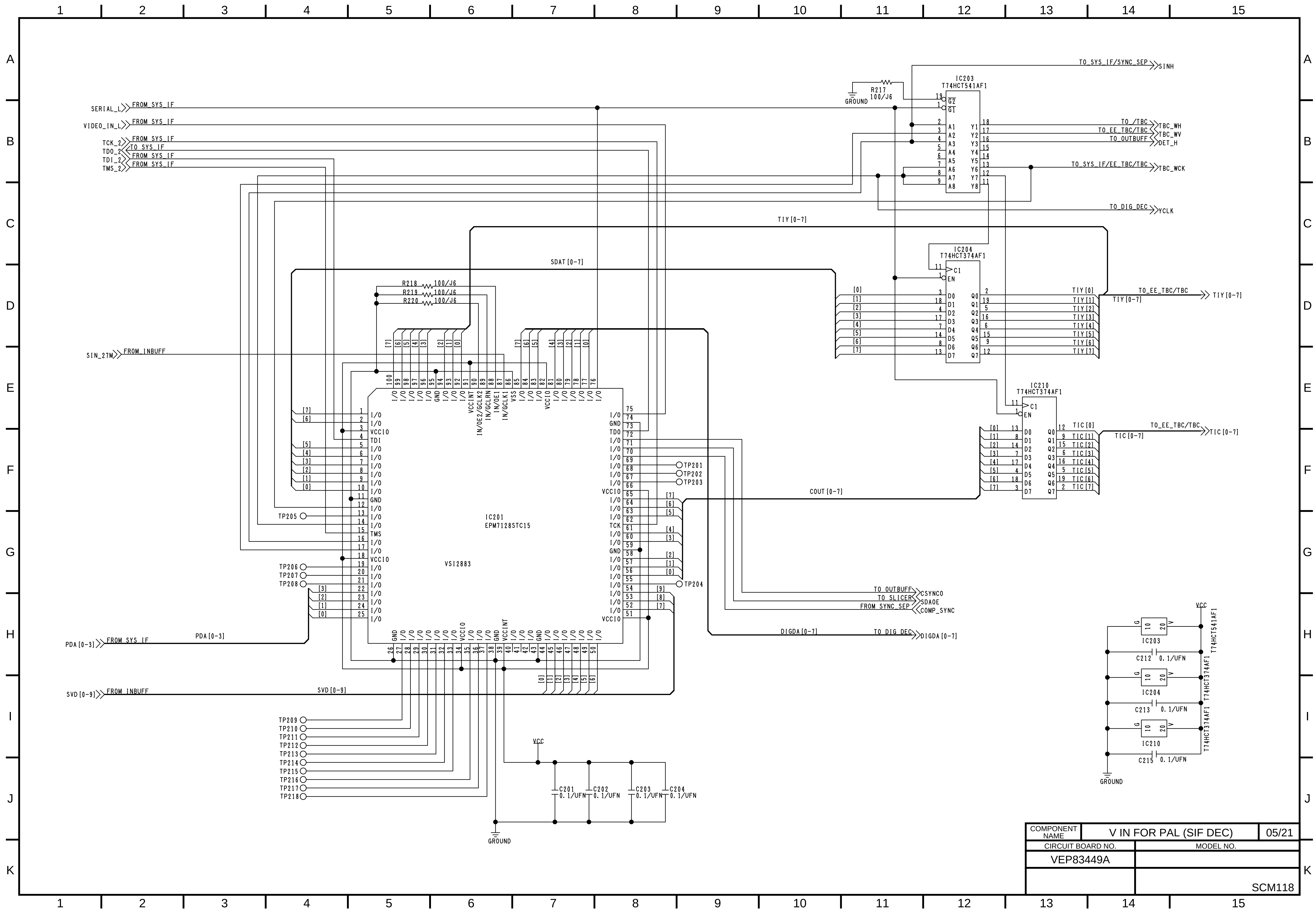
COMPONENT NAME	V IN FOR PAL (POWER)	02/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM115	


DIP[0-9]
DIN[0-9]
FROM CONNECTOR
DIP[0-9]
DIN[0-9]
DIN[0]
DIN[1]
DIN[2]
DIN[3]
DIN[4]
DIN[5]
DIN[6]
DIN[7]
DIN[8]
DIN[9]
DIP[0]
DIP[1]
DIP[2]
DIP[3]
DIP[4]
DIP[5]
DIP[6]
DIP[7]
DIP[8]
DIP[9]
R101 100/J6
R103 100/J6
R104 100/J6
R105 100/J6
R106 100/J6
R107 100/J6
R108 100/J6
R109 100/J6
R110 100/J6
R111 100/J6
R112 100/J6
IC101 MC10H125MR
IC102 MC10H125MR
IC103 MC10H125MR
DA
DB
DC
DD
QA
QB
QC
QD
[0]
[1]
[2]
[3]
[4]
[5]
[6]
[7]
[8]
[9]
SVD[0-9]
TO SIF DEC
SVD[0-9]
VCC
C101 0.1/UFN
C102 0.1/UFN
C103 0.1/UFN
C104 0.1/UFN
C105 0.1/UFN
C106 0.1/UFN
VBB
VEE
V
G
GROUND
R113 0/J6
R114 OPEN/J6
YC_IN_27M_P
YC_IN_27M_N
EE_HRST
EE_VRST
C132 100P/UN
C131 100P/UN
R115 100/J6
IC110 74F244SJ-R1
2G
1G
2A4
2A3
2A2
2A1
1A4
1A3
1A2
1A1
2Y4
2Y3
2Y2
2Y1
1Y4
1Y3
1Y2
1Y1
TO EE TBC
EE_RH
EE_RV
EE_RCK
TO SIF DEC
SIN_27M
C110 0.1/UFN
C112 270P/UN
C114 100P
C107 0.1/UFN
C108 0.1/UFN
IC107 MC10H125MR
C111 100P/UN
R116 100/J6
R102 100/J6
C113 PAT/UN
EE_CLK_P
EE_CLK_N
TBC_RCK_P
TBC_RCK_N
R120 0/J6
R121 OPEN/J6
TO SYS IF
TRCK

COMPONENT NAME	V IN FOR PAL (IN BUFF)	03/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM116	

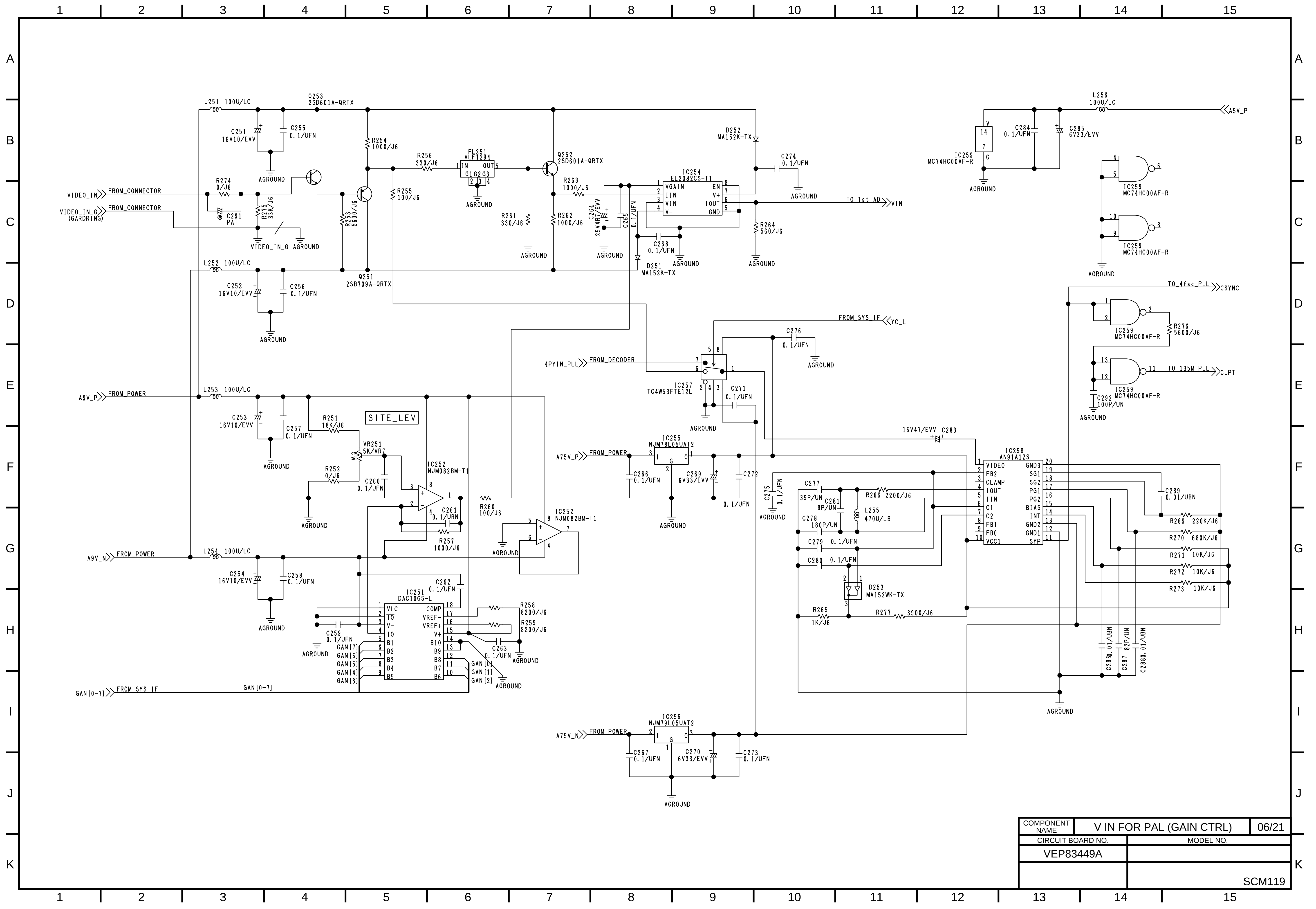

P41
VJP1246T
VCC
TDO
TCK
TMS
TDI
GND
R165 1000/J6
R166 1000/J6
R167 1000/J6
R168 1000/J6
C162 0.1/UFN
VCC
GROUND
TDO_2 FROM SIF_DEC
TCK_2 TO SIF_DEC
TMS_2 TO SIF_DEC
TBC_WCK FROM SIF_DEC/135M_PLL
INP_FRM FROM SYNC_SEP
SIN_FRM FROM TBC
FRM_SEL TO OUTBUFF
RSTH_EE TO EE_TBC
MIDW FROM TBC
PCST FROM TBC
SINH FROM SIF_DEC
CDL[0-2] TO TBC/EE_TBC
CDL[0-2]
CDL[2]
CDL[1]
CDL[0]
WRST TO OUTBUFF
RRST TO OUTBUFF
BOE TO OUTBUFF
MOE TO OUTBUFF
TBC_RCK TO TBC/OUTBUFF
TBC_RH TO TBC/OUTBUFF
TBC_RV TO TBC/OUTBUFF
AV_CS_VIDEO_L FROM CONNECTOR
AV_RST_L FROM CONNECTOR
AV_IOWR_L FROM CONNECTOR
AV_IORD_L FROM CONNECTOR
AVA[0-10] FROM CONNECTOR
AVA[0] AVA[1] AVA[2] AVA[3] AVA[4] AVA[5] AVA[6] AVA[7] AVA[8] AVA[9] AVA[10]
R170 0/J6
R169 PAT/J6
C161 PAT/UFN
VIN_D FROM SYNC_SEP
VIN_A FROM SYNC_SEP
TP154 TP155
R146 100/J6
R147 100/J6
IC153
EPM7128STC15
VSI2985
R148 PAT/J6 [3]
R149 PAT/J6 [2]
R150 PAT/J6 [1]
R151 PAT/J6 [0]
PDA[0-3]
TO SIF_DEC TDI_2
TO SIF_DEC PDA[0-3]
FROM 4fsc_PLL FSC
TP151 TP152 TP153
TO SLICER S_CS
C166 PAT/UN
C167 PAT/UN
TRCK FROM INBUFF
TBC_RHRST FROM CONNECTOR
TBC_RVRST FROM CONNECTOR
VBLK_CS FROM CONNECTOR R152 47/J6
VBLK_CLK FROM CONNECTOR R153 47/J6
VBLK_SDI FROM CONNECTOR R154 47/J6
VBLK_BW1 FROM CONNECTOR
VBLK_BW2 FROM CONNECTOR
R118 10K/J6
R119 10K/J6
VCC
C153 0.1/UFN
C154 0.1/UFN
C155 0.1/UFN
C157 0.1/UFN
GROUND
IC151 SN74S1051NSL
C151 0.1/UFN
IC152 SN74S1051NSL
C152 0.1/UFN
AVD[0-7] FROM_CONNECTOR
AVD[0] AVD[1] AVD[2] AVD[3] AVD[4] AVD[5] AVD[6] AVD[7]
IC156 74F245SJ-R1
DIR
G
B4B[0] B4B[1] B4B[2] B4B[3] B4B[4] B4B[5] B4B[6] B4B[7]
C156 0.1/UFN
B4B[0-7]
TO TBC SYS_2_L
TO 2nd AD PB/2nd AD PR/DECODER KILL_H
FROM 4fsc_PLL NSTD_H
FROM 4fsc_PLL INSCH_H
FROM 4Fsc_PLL BW_L
TO SIF_DEC/4fsc_PLL VIDEO_IN_L
FROM CONNECTOR YC_WIDE
R160 10K/J6
QR151 MUN2212T1
C160 0.01/UBN
CP5
IC164 UPD71055GB
CP2 CP12 CP6 CP3 CP4
R159 10K/J6
SYNC_SEP VLOCK_L
C158 0.1/UFN
TO CDEM/GAIN_CNTRL/4FSCPLL/DECODER/SYNC_SEP YC_L
TO 2nd AD COMPONENT_L
TO EE_TBC/135_PLL/SIF_DEC/TBC/DIG_DEC SERIAL_L
TO 4fsc_PLL FSC_FIX_L
TO SYNC_SEP FRM_DET
INL[0-4] FROM TBC INL[0-4]
INL[0] INL[1] INL[2] INL[3] INL[4]
CP11
R161 OPEN/J6
R162 OPEN/J6
R163 0/J6
R164 0/J6
IC165 UPD71055GB
CP7 CP8
C159 0.1/UFN
GAN[0] GAN[1] GAN[2] GAN[3] GAN[4] GAN[5] GAN[6] GAN[7]
TO GAIN_CNTRL GAN[0-7]

COMPONENT NAME	V IN FOR PAL (SYS IF)	04/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM117	

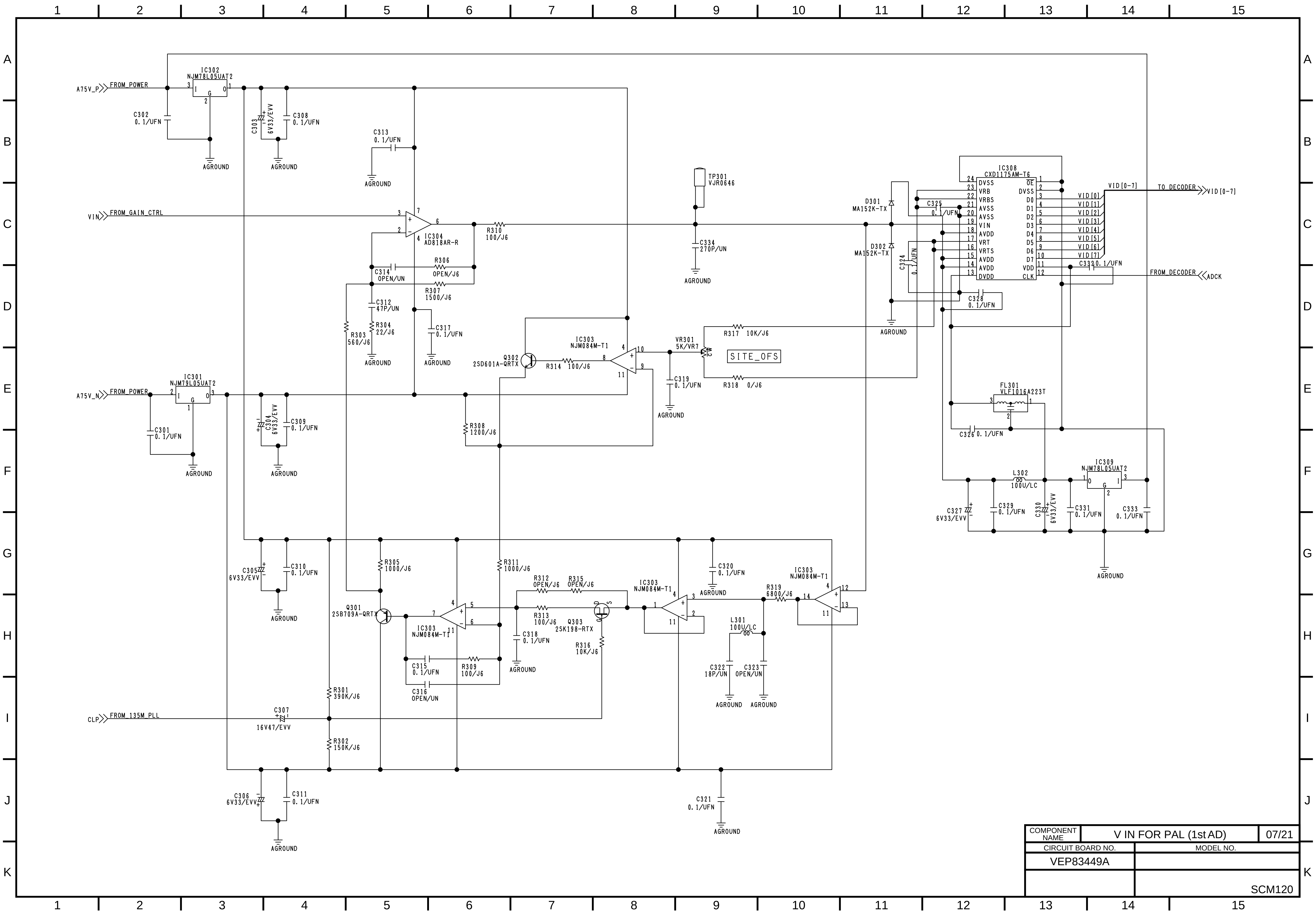


SERIAL_L FROM_SYS_IF
VIDEO_IN_L FROM_SYS_IF
TCK_2 FROM_SYS_IF
TDO_2 TO_SYS_IF
TDI_2 FROM_SYS_IF
TMS_2 FROM_SYS_IF
SIN_27M FROM_INBUFF
PDA[0-3] FROM_SYS_IF
PDA[0-3]
SVD[0-9] FROM_INBUFF
SVD[0-9]
R217 100/J6
GROUND
IC203 T74HCT541AF1
TO_SYS_IF/SYNC_SEP SINH
TO_/TBC TBC_WH
TO_EE_TBC/TBC TBC_WV
TO_OUTBUFF DET_H
TO_SYS_IF/EE_TBC/TBC TBC_WCK
TO_DIG_DEC YCLK
TIY[0-7]
SDAT[0-7]
IC204 T74HCT374AF1
TO_EE_TBC/TBC TIY[0-7]
R218 100/J6
R219 100/J6
R220 100/J6
IC210 T74HCT374AF1
TO_EE_TBC/TBC TIC[0-7]
COUT[0-7]
IC201 EPM7128STC15
VSI2883
TP201
TP202
TP203
TP204
TP205
TP206
TP207
TP208
TO_OUTBUFF CSYNCO
TO_SLICER SDAOE
FROM_SYNC_SEP COMP_SYNC
DIGDA[0-7]
TO_DIG_DEC DIGDA[0-7]
TP209
TP210
TP211
TP212
TP213
TP214
TP215
TP216
TP217
TP218
VCC
C201 0.1/UFN
C202 0.1/UFN
C203 0.1/UFN
C204 0.1/UFN
GROUND
VCC
IC203 T74HCT541AF1
C212 0.1/UFN
IC204 T74HCT374AF1
C213 0.1/UFN
IC210 T74HCT374AF1
C215 0.1/UFN
GROUND

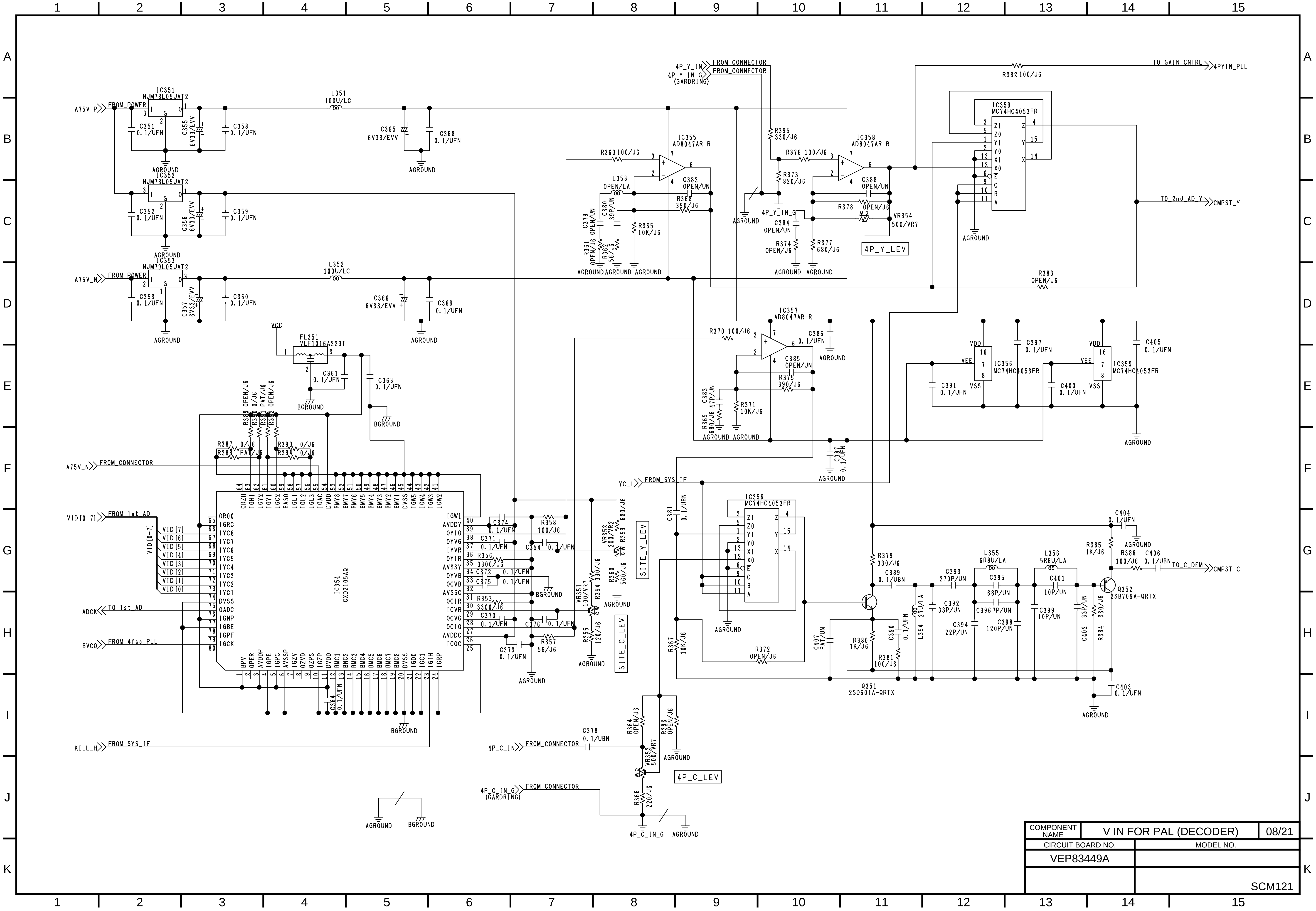
COMPONENT NAME	V IN FOR PAL (SIF DEC)	05/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM118	


VIDEO_IN FROM CONNECTOR
VIDEO_IN_G (GARDRING) FROM CONNECTOR
A9V_P FROM POWER
A9V_N FROM POWER
GAN[0-7] FROM SYS IF
4PYIN_PLL FROM DECODER
FROM SYS IF YC_L
A75V_P FROM POWER
A75V_N FROM POWER
A5V_P
TO 1st AD VIN
TO 4fsc PLL CSYNC
TO 135M PLL CLPT
L251 100U/LC
L252 100U/LC
L253 100U/LC
L254 100U/LC
L255 470U/LB
L256 100U/LC
Q251 2SB709A-QRTX
Q252 2SD601A-QRTX
Q253 2SD601A-QRTX
FL251 VLF1294
IC251 DAC10GS-L
IC252 NJM082BM-T1
IC254 EL2082CS-T1
IC255 NJM78L05UAT2
IC256 NJM79L05UAT2
IC257 TC4W53FTE12L
IC258 AN91A12S
IC259 MC74HC00AF-R
D251 MA152K-TX
D252 MA152K-TX
D253 MA152WK-TX
VR251 5K/VR7
R251 18K/J6
R252 0/J6
R253 5600/J6
R254 1000/J6
R255 100/J6
R256 330/J6
R257 1000/J6
R258 8200/J6
R259 8200/J6
R260 100/J6
R261 330/J6
R262 1000/J6
R263 1000/J6
R264 560/J6
R265 1K/J6
R266 2200/J6
R269 220K/J6
R270 680K/J6
R271 10K/J6
R272 10K/J6
R273 10K/J6
R274 0/J6
R275 33K/J6
R276 5600/J6
R277 3900/J6
C251 16V10/EVV
C252 16V10/EVV
C253 16V10/EVV
C254 16V10/EVV
C255 0.1/UFN
C256 0.1/UFN
C257 0.1/UFN
C258 0.1/UFN
C259 0.1/UFN
C260 0.1/UFN
C261 0.1/UBN
C262 0.1/UFN
C263 0.1/UFN
C264 25V4R7/EVV
C265 0.1/UFN
C266 0.1/UFN
C267 0.1/UFN
C268 0.1/UFN
C269 6V33/EVV
C270 6V33/EVV
C271 0.1/UFN
C272 0.1/UFN
C273 0.1/UFN
C274 0.1/UFN
C275 0.1/UFN
C276 0.1/UFN
C277 39P/UN
C278 180P/UN
C279 0.1/UFN
C280 0.1/UFN
C281 8P/UN
C283 16V47/EVV
C284 0.1/UFN
C285 6V33/EVV
C286 0.01/UBN
C287 82P/UN
C288 0.01/UBN
C289 0.01/UBN
C291 PAT
C292 100P/UN
SITE_LEV
AGROUND
VIDEO_IN_G
VGAIN IIN VIN V- EN V+ IOUT GND
VLC IO V- IO B1 B2 B3 B4 B5 COMP VREF- VREF+ V+ B10 B9 B8 B7 B6
GAN[7] GAN[6] GAN[5] GAN[4] GAN[3] GAN[0] GAN[1] GAN[2]
VIDEO FB2 CLAMP IOUT IIN C1 C2 FB1 FB0 VCC1 GND3 SG1 SG2 PG1 PG2 BIAS INT GND2 GND1 SYP
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	V IN FOR PAL (GAIN CTRL)	06/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM119	


A75V_P FROM_POWER
IC302 NJM78L05UAT2
C302 0.1/UFN
C303 6V33/EVV
C308 0.1/UFN
AGROUND
C313 0.1/UFN
VIN FROM_GAIN_CTRL
IC304 AD818AR-R
R310 100/J6
C314 OPEN/UN
R306 OPEN/J6
R307 1500/J6
C312 47P/UN
R304 22/J6
R303 560/J6
C317 0.1/UFN
Q302 2SD601A-QRTX
R314 100/J6
IC303 NJM084M-T1
VR301 5K/VR7
SITE_OFS
R317 10K/J6
R318 0/J6
C319 0.1/UFN
TP301 VJR0646
C334 270P/UN
D301 MA152K-TX
D302 MA152K-TX
C325 0.1/UFN
C324 0.1/UFN
IC308 CXD1175AM-T6
DVSS VRB VRBS AVSS AVSS VIN AVDD VRT VRTS AVDD AVDD DVDD
OE DVSS D0 D1 D2 D3 D4 D5 D6 D7 VDD CLK
VID[0] VID[1] VID[2] VID[3] VID[4] VID[5] VID[6] VID[7]
VID[0-7] TO_DECODER VID[0-7]
C332 0.1/UFN
FROM_DECODER ADCK
C328 0.1/UFN
FL301 VLF1016A223T
C326 0.1/UFN
A75V_N FROM_POWER
IC301 NJM79L05UAT2
C301 0.1/UFN
C304 6V33/EVV
C309 0.1/UFN
R308 1200/J6
L302 100U/LC
IC309 NJM78L05UAT2
C327 6V33/EVV
C329 0.1/UFN
C330 6V33/EVV
C331 0.1/UFN
C333 0.1/UFN
C305 6V33/EVV
C310 0.1/UFN
R305 1000/J6
R311 1000/J6
Q301 2SB709A-QRTX
R312 OPEN/J6
R315 OPEN/J6
R313 100/J6
Q303 2SK198-RTX
C318 0.1/UFN
R316 10K/J6
C315 0.1/UFN
R309 100/J6
C316 OPEN/UN
C320 0.1/UFN
R319 6800/J6
L301 100U/LC
C322 18P/UN
C323 OPEN/UN
R301 390K/J6
CLP FROM_135M_PLL
C307 16V47/EVV
R302 150K/J6
C306 6V33/EVV
C311 0.1/UFN
C321 0.1/UFN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	V IN FOR PAL (1st AD)	07/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM120	



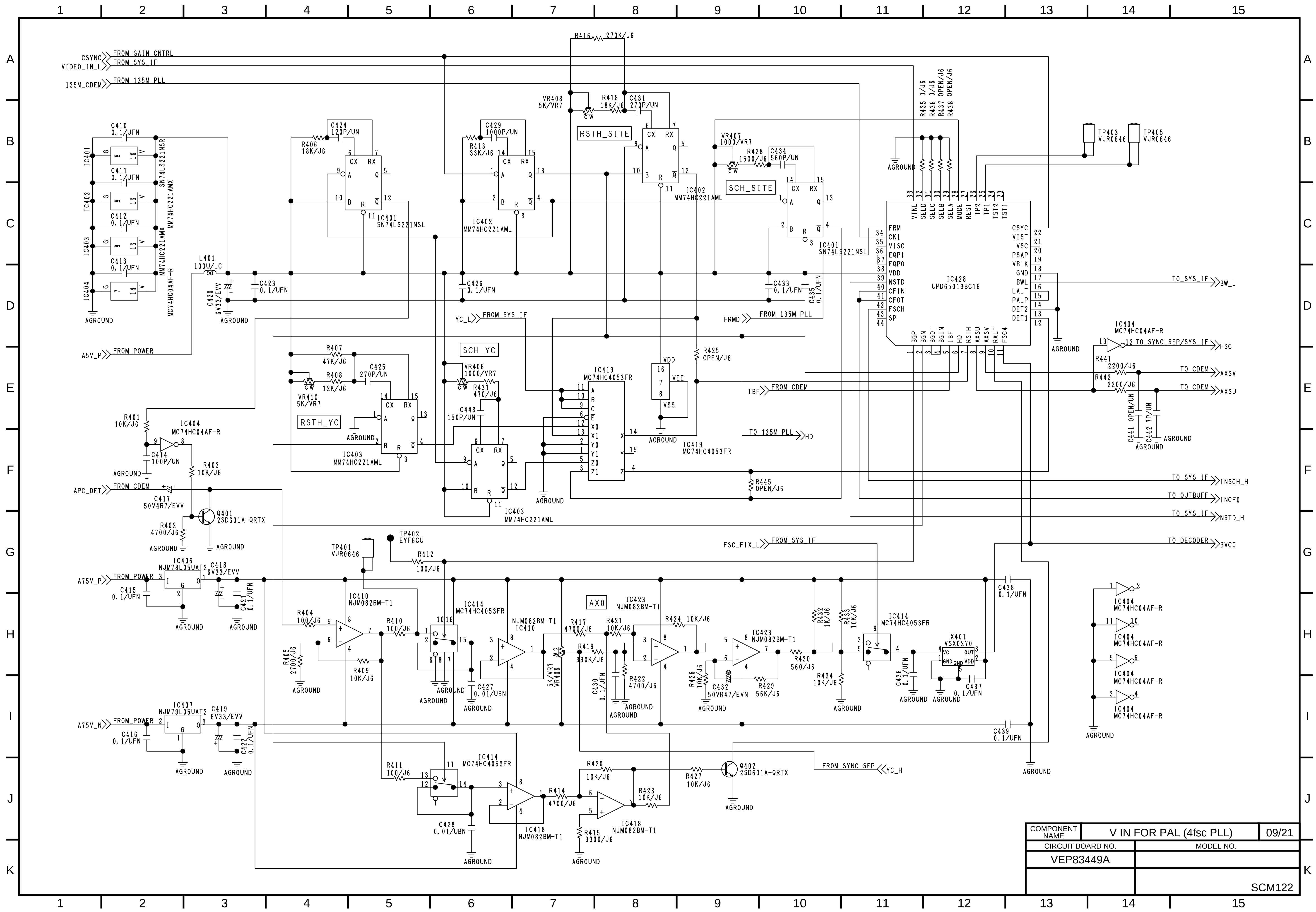
A75V_P FROM POWER
IC351 NJM78L05UAT2
C351 0.1/UFN
C355 6V33/EVV
C358 0.1/UFN
AGROUND
IC352 NJM78L05UAT2
C352 0.1/UFN
C356 6V33/EVV
C359 0.1/UFN
A75V_N FROM POWER
IC353 NJM79L05UAT2
C353 0.1/UFN
C357 6V33/EVV
C360 0.1/UFN
L351 100U/LC
C365 6V33/EVV
C368 0.1/UFN
L352 100U/LC
C366 6V33/EVV
C369 0.1/UFN
VCC
FL351 VLF1016A223T
C361 0.1/UFN
C363 0.1/UFN
BGROUND
4P_Y_IN FROM CONNECTOR
4P_Y_IN_G FROM CONNECTOR (GARDRING)
IC355 AD8047AR-R
R363 100/J6
L353 OPEN/LA
C382 OPEN/UN
R368 390/J6
C379 OPEN/UN
C380 39P/UN
R365 10K/J6
R361 OPEN/J6
R362 56/J6
R395 330/J6
R373 820/J6
R376 100/J6
IC358 AD8047AR-R
C388 OPEN/UN
R378 OPEN/J6
VR354 500/VR7
C384 OPEN/UN
R374 OPEN/J6
R377 680/J6
4P_Y_LEV
R382 100/J6
TO GAIN CNTRL
4PYIN_PLL
IC359 MC74HC4053FR
TO 2nd AD Y
CMPST_Y
R383 OPEN/J6
IC357 AD8047AR-R
R370 100/J6
C386 0.1/UFN
C385 OPEN/UN
R375 390/J6
C383 47P/UN
R371 10K/J6
R369 680/J6
C387 0.1/UFN
IC356 MC74HC4053FR
C397 0.1/UFN
C391 0.1/UFN
C405 0.1/UFN
C400 0.1/UFN
A75V_N FROM CONNECTOR
R387 0/J6
R388 PAT/J6
R389 OPEN/J6
R390 0/J6
R391 PAT/J6
R392 OPEN/J6
R393 0/J6
R394 0/J6
VID[0-7] FROM 1st AD
ADCK TO 1st AD
BVCO FROM 4fsc PLL
KILL_H FROM SYS_IF
IC354 CXD2105AQ
C364 0.1/UFN
C374 0.1/UFN
R358 100/J6
C371 0.1/UFN
C354 0.1/UFN
R356 3300/J6
C372 0.1/UFN
C375 0.1/UFN
R353 3300/J6
C370 0.1/UFN
C376 0.1/UFN
R357 56/J6
C373 0.1/UFN
VR352 200/VR2
R359 680/J6
R360 560/J6
SITE_Y_LEV
VR351 100/VR7
R354 330/J6
R355 120/J6
SITE_C_LEV
YC_L FROM SYS_IF
C381 0.1/UBN
R367 10K/J6
R372 OPEN/J6
R379 330/J6
C389 0.1/UBN
C390 0.1/UFN
L354 27U/LA
C407 PAT/UN
R380 1K/J6
R381 100/J6
Q351 2SD601A-QRTX
C393 270P/UN
C392 33P/UN
C394 22P/UN
L355 6R8U/LA
C395 68P/UN
C396 7P/UN
C398 120P/UN
L356 5R6U/LA
C401 10P/UN
C399 10P/UN
C402 33P/UN
R384 330/J6
C404 0.1/UFN
R385 1K/J6
R386 100/J6
C406 0.1/UBN
TO C DEM
CMPST_C
Q352 2SB709A-QRTX
C403 0.1/UFN
4P_C_IN FROM CONNECTOR
C378 0.1/UBN
R364 OPEN/J6
R396 OPEN/J6
VR353 500/VR7
4P_C_LEV
R366 220/J6
4P_C_IN_G FROM CONNECTOR (GARDRING)
4P_C_IN_G

COMPONENT NAME | V IN FOR PAL (DECODER) | 08/21

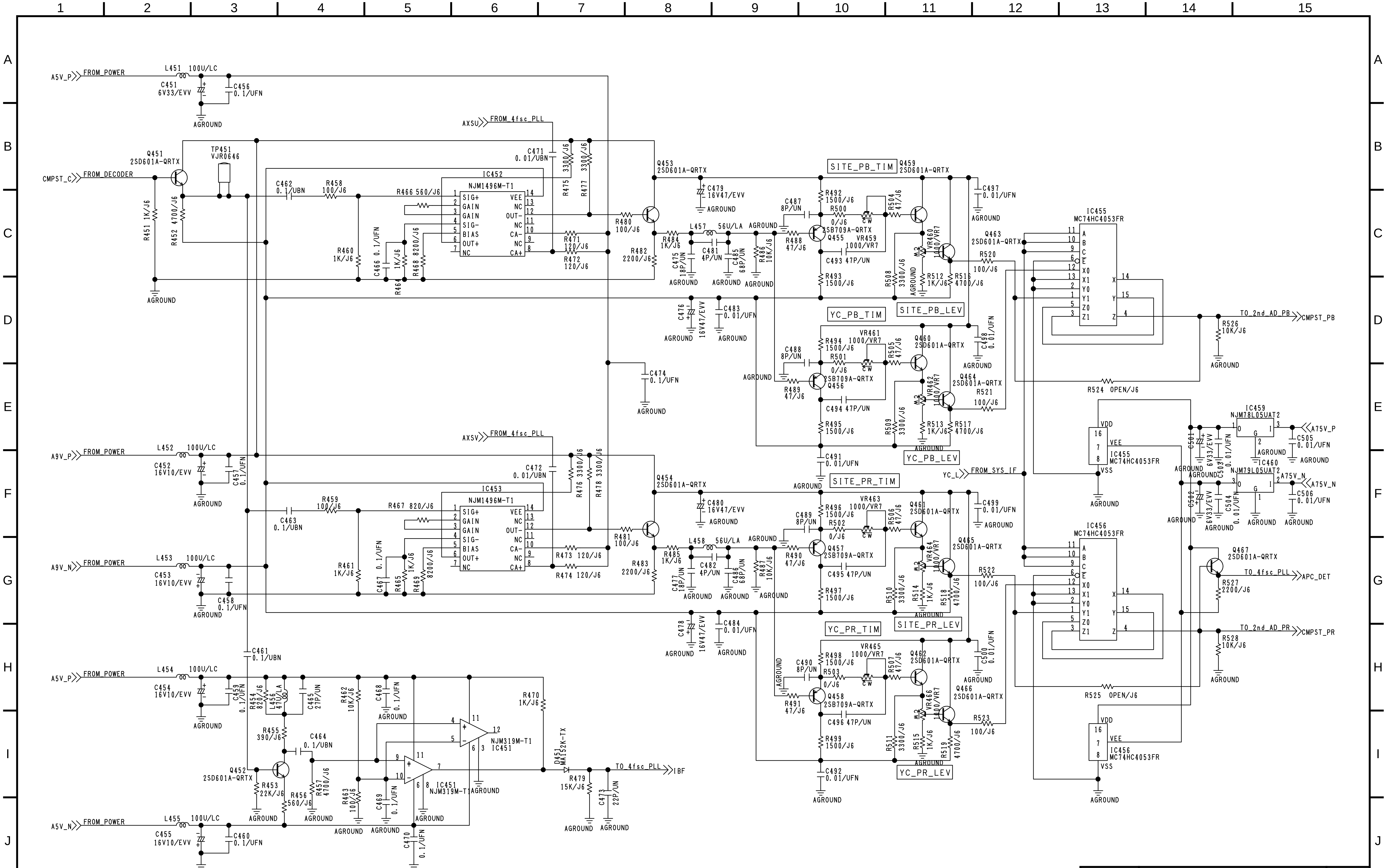
CIRCUIT BOARD NO. | MODEL NO.

VEP83449A

SCM121


CSYNC
FROM_GAIN_CNTRL
VIDEO_IN_L
FROM_SYS_IF
135M_CDEM
FROM_135M_PLL
A5V_P
FROM_POWER
APC_DET
FROM_CDEM
A75V_P
A75V_N
YC_L
FRMD
IBF
FSC_FIX_L
FROM_SYNC_SEP
YC_H
TO_SYS_IF
BW_L
TO_SYNC_SEP/SYS_IF
FSC
TO_CDEM
AXSV
AXSU
TO_135M_PLL
HD
INSCH_H
TO_OUTBUFF
INCF0
NSTD_H
TO_DECODER
BVC0
IC401 SN74LS221NSL
IC402 MM74HC221AML
IC403 MM74HC221AML
IC404 MC74HC04AF-R
IC406 NJM78L05UAT2
IC407 NJM79L05UAT2
IC410 NJM082BM-T1
IC414 MC74HC4053FR
IC418 NJM082BM-T1
IC419 MC74HC4053FR
IC423 NJM082BM-T1
IC428 UPD65013BC16
X401 VSX0270
Q401 2SD601A-QRTX
Q402 2SD601A-QRTX
TP401 VJR0646
TP402 EYF6CU
TP403 VJR0646
TP405 VJR0646
L401 100U/LC
VR406 1000/VR7
VR407 1000/VR7
VR408 5K/VR7
VR409 5K/VR7
VR410 5K/VR7
R416 270K/J6
R418 18K/J6
C431 270P/UN
R406 18K/J6
C424 120P/UN
R413 33K/J6
C429 1000P/UN
R428 1500/J6
C434 560P/UN
R435 0/J6
R436 0/J6
R437 OPEN/J6
R438 OPEN/J6
RSTH_SITE
SCH_SITE
SCH_YC
RSTH_YC
AX0
R407 47K/J6
R408 12K/J6
C425 270P/UN
R431 470/J6
C443 150P/UN
R425 OPEN/J6
R445 OPEN/J6
R441 2200/J6
R442 2200/J6
C441 OPEN/UN
C442 TP/UN
R401 10K/J6
C414 100P/UN
R403 10K/J6
C417 50V4R7/EVV
R402 4700/J6
C410 0.1/UFN
C411 0.1/UFN
C412 0.1/UFN
C413 0.1/UFN
C420 6V33/EVV
C423 0.1/UFN
C426 0.1/UFN
C433 0.1/UFN
C435 0.1/UFN
C415 0.1/UFN
C418 6V33/EVV
C421 0.1/UFN
C416 0.1/UFN
C419 6V33/EVV
C422 0.1/UFN
R412 100/J6
R404 100/J6
R405 2700/J6
R409 10K/J6
R410 100/J6
C427 0.01/UBN
R417 4700/J6
R419 390K/J6
R421 10K/J6
R422 4700/J6
C430 0.1/UFN
R424 10K/J6
R426 10K/J6
C432 50VR47/EVN
R429 56K/J6
R430 560/J6
R432 1K/J6
R433 10K/J6
R434 10K/J6
C436 0.1/UFN
C437 0.1/UFN
C438 0.1/UFN
C439 0.1/UFN
R411 100/J6
C428 0.01/UBN
R414 4700/J6
R415 3300/J6
R420 10K/J6
R423 10K/J6
R427 10K/J6
AGROUND
FRM
CK1
VISC
EQPI
EQPO
VDD
NSTD
CFIN
CFOT
FSCH
SP
CSYC
VIST
VSC
PSAP
VBLK
GND
BWL
LALT
PALP
DET2
DET1
VINL
SELD
SELC
SELB
SELA
MODE
REST
TP2
TP1
TST2
TST1
BGP
BGN
BGOT
BGIN
IBF
HD
RSTH
AXSU
AXSV
RALT
FSC4

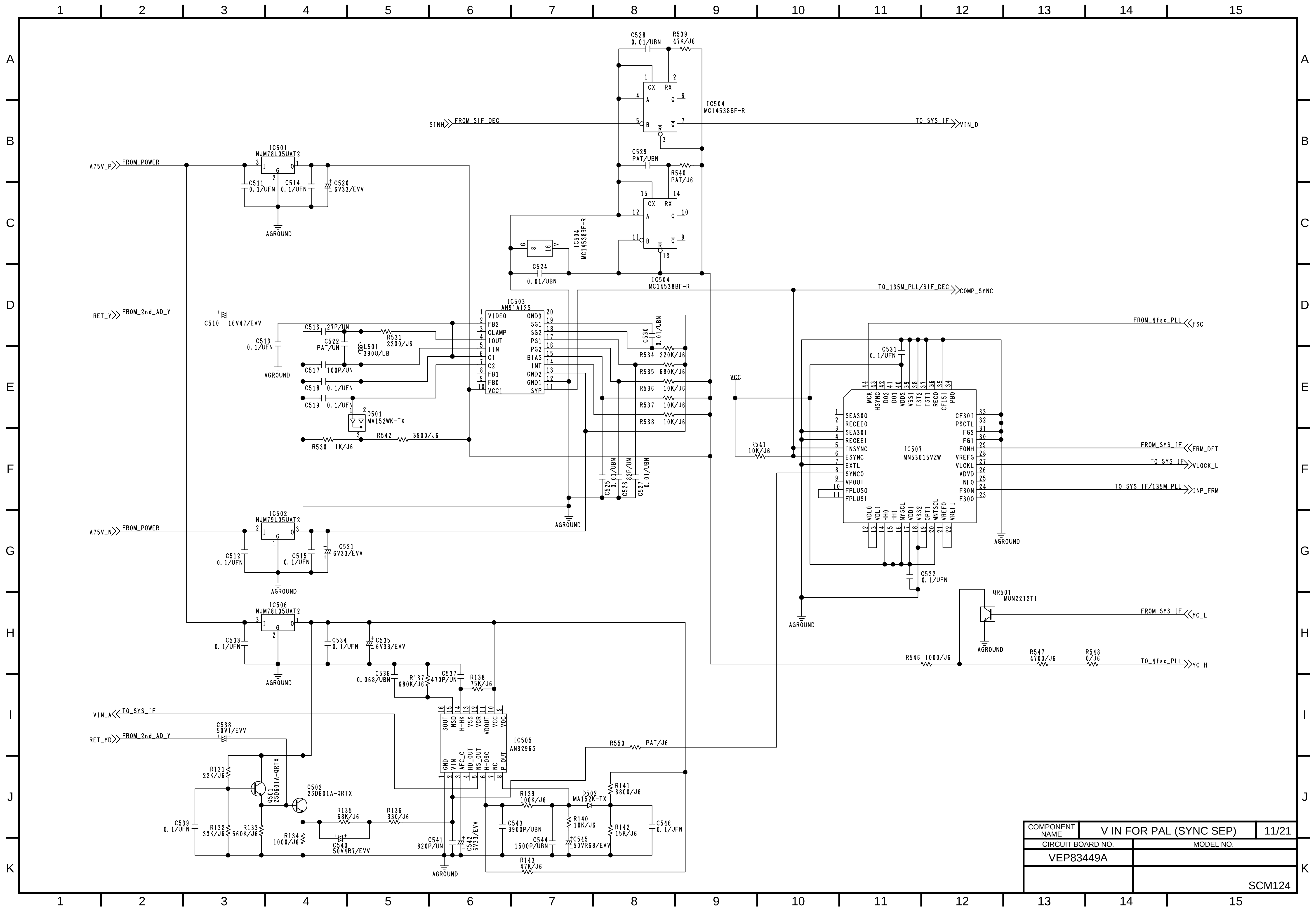
COMPONENT NAME	V IN FOR PAL (4fsc PLL)	09/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM122	



A5V_P FROM POWER
L451 100U/LC
C451 6V33/EVV
C456 0.1/UFN
AGROUND
AXSU FROM 4fsc PLL
CMPST_C FROM DECODER
Q451 2SD601A-QRTX
TP451 VJR0646
R451 1K/J6
R452 4700/J6
C462 0.1/UBN
R458 100/J6
R466 560/J6
IC452 NJM1496M-T1
SIG+
GAIN
GAIN
SIG-
BIAS
OUT+
NC
VEE
NC
OUT-
NC
CA-
NC
CA+
R460 1K/J6
C466 0.1/UFN
R464 1K/J6
R468 8200/J6
C471 0.01/UBN
R475 3300/J6
R477 3300/J6
R471 120/J6
R472 120/J6
Q453 2SD601A-QRTX
R480 100/J6
R482 2200/J6
C479 16V47/EVV
L457 56U/LA
R484 1K/J6
C475 18P/UN
C481 4P/UN
C485 68P/UN
R486 10K/J6
C476 16V47/EVV
C483 0.01/UFN
C474 0.1/UFN
SITE_PB_TIM
Q459 2SD601A-QRTX
C487 8P/UN
R492 1500/J6
R500 0/J6
R504 47/J6
VR459 1000/VR7
R488 47/J6
Q455 2SB709A-QRTX
C493 47P/UN
R493 1500/J6
R508 3300/J6
R512 1K/J6
R516 4700/J6
VR460 1000/VR7
Q463 2SD601A-QRTX
C497 0.01/UFN
R520 100/J6
SITE_PB_LEV
YC_PB_TIM
VR461 1000/VR7
R494 1500/J6
C488 8P/UN
R501 0/J6
R505 47/J6
Q460 2SD601A-QRTX
C498 0.01/UFN
R489 47/J6
Q456 2SB709A-QRTX
VR462 1000/VR7
Q464 2SD601A-QRTX
R521 100/J6
C494 47P/UN
R495 1500/J6
R509 3300/J6
R513 1K/J6
R517 4700/J6
YC_PB_LEV
C491 0.01/UFN
IC455 MC74HC4053FR
A B C E X0 X1 Y0 Y1 Z0 Z1 X Y Z
VDD VEE VSS
TO 2nd AD PB
CMPST_PB
R526 10K/J6
R524 OPEN/J6
IC459 NJM78L05UAT2
A75V_P
C501 6V33/EVV
C503 0.01/UFN
C505 0.01/UFN
IC460 NJM79L05UAT2
A75V_N
C502 6V33/EVV
C504 0.01/UFN
C506 0.01/UFN
YC_L FROM SYS IF
A9V_P FROM POWER
L452 100U/LC
C452 16V10/EVV
C457 0.1/UFN
AXSV FROM 4fsc PLL
C472 0.01/UBN
R476 3300/J6
R478 3300/J6
IC453 NJM1496M-T1
Q454 2SD601A-QRTX
R459 100/J6
C463 0.1/UBN
R467 820/J6
R461 1K/J6
C467 0.1/UFN
R465 1K/J6
R469 8200/J6
R473 120/J6
R474 120/J6
R481 100/J6
R483 2200/J6
C480 16V47/EVV
L458 56U/LA
R485 1K/J6
C477 18P/UN
C482 4P/UN
C486 68P/UN
R487 10K/J6
C478 16V47/EVV
C484 0.01/UFN
SITE_PR_TIM
VR463 1000/VR7
R496 1500/J6
C489 8P/UN
R502 0/J6
R506 47/J6
Q461 2SD601A-QRTX
C499 0.01/UFN
R490 47/J6
Q457 2SB709A-QRTX
VR464 1000/VR7
Q465 2SD601A-QRTX
R522 100/J6
C495 47P/UN
R497 1500/J6
R510 3300/J6
R514 1K/J6
R518 4700/J6
SITE_PR_LEV
YC_PR_TIM
VR465 1000/VR7
R498 1500/J6
C490 8P/UN
R503 0/J6
R507 47/J6
Q462 2SD601A-QRTX
C500 0.01/UFN
R491 47/J6
Q458 2SB709A-QRTX
VR466 1000/VR7
Q466 2SD601A-QRTX
R523 100/J6
C496 47P/UN
R499 1500/J6
R511 3300/J6
R515 1K/J6
R519 4700/J6
YC_PR_LEV
C492 0.01/UFN
IC456 MC74HC4053FR
Q467 2SD601A-QRTX
R527 2200/J6
TO 4fsc PLL
APC_DET
TO 2nd AD PR
CMPST_PR
R528 10K/J6
R525 OPEN/J6
A9V_N FROM POWER
L453 100U/LC
C453 16V10/EVV
C458 0.1/UFN
C461 0.1/UBN
A5V_P FROM POWER
L454 100U/LC
C454 16V10/EVV
C459 0.1/UFN
R454 820/J6
L456 47U/LA
C465 27P/UN
R462 10K/J6
C468 0.1/UFN
R470 1K/J6
R455 390/J6
C464 0.1/UBN
IC451 NJM319M-T1
D451 MA152K-TX
R479 15K/J6
C473 22P/UN
TO 4fsc PLL
IBF
Q452 2SD601A-QRTX
R453 22K/J6
R456 560/J6
R457 4700/J6
R463 100/J6
C469 0.1/UFN
A5V_N FROM POWER
L455 100U/LC
C455 16V10/EVV
C460 0.1/UFN
C470 0.1/UFN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

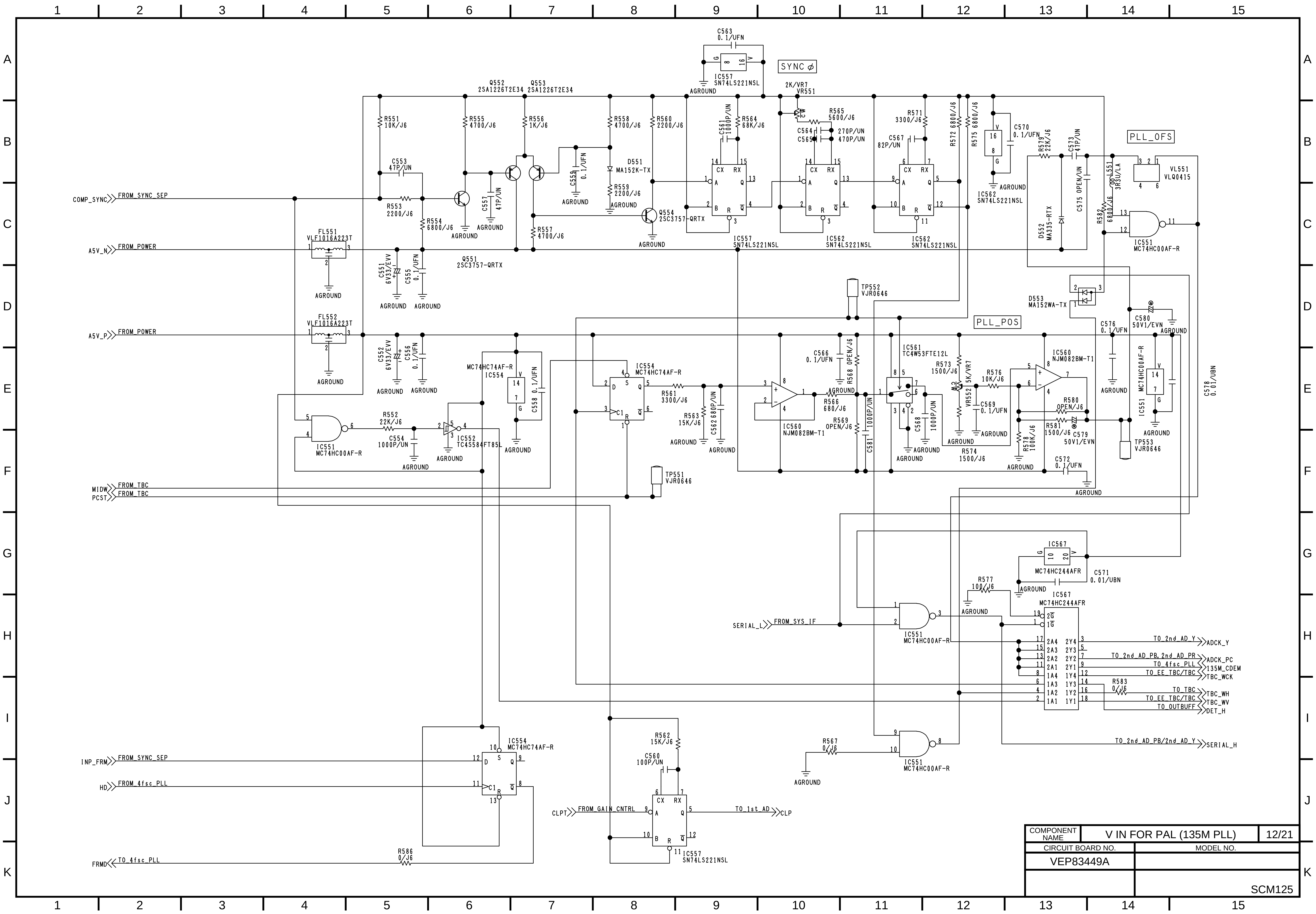
COMPONENT NAME	V IN FOR PAL (CDEM)	10/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		

SCM123



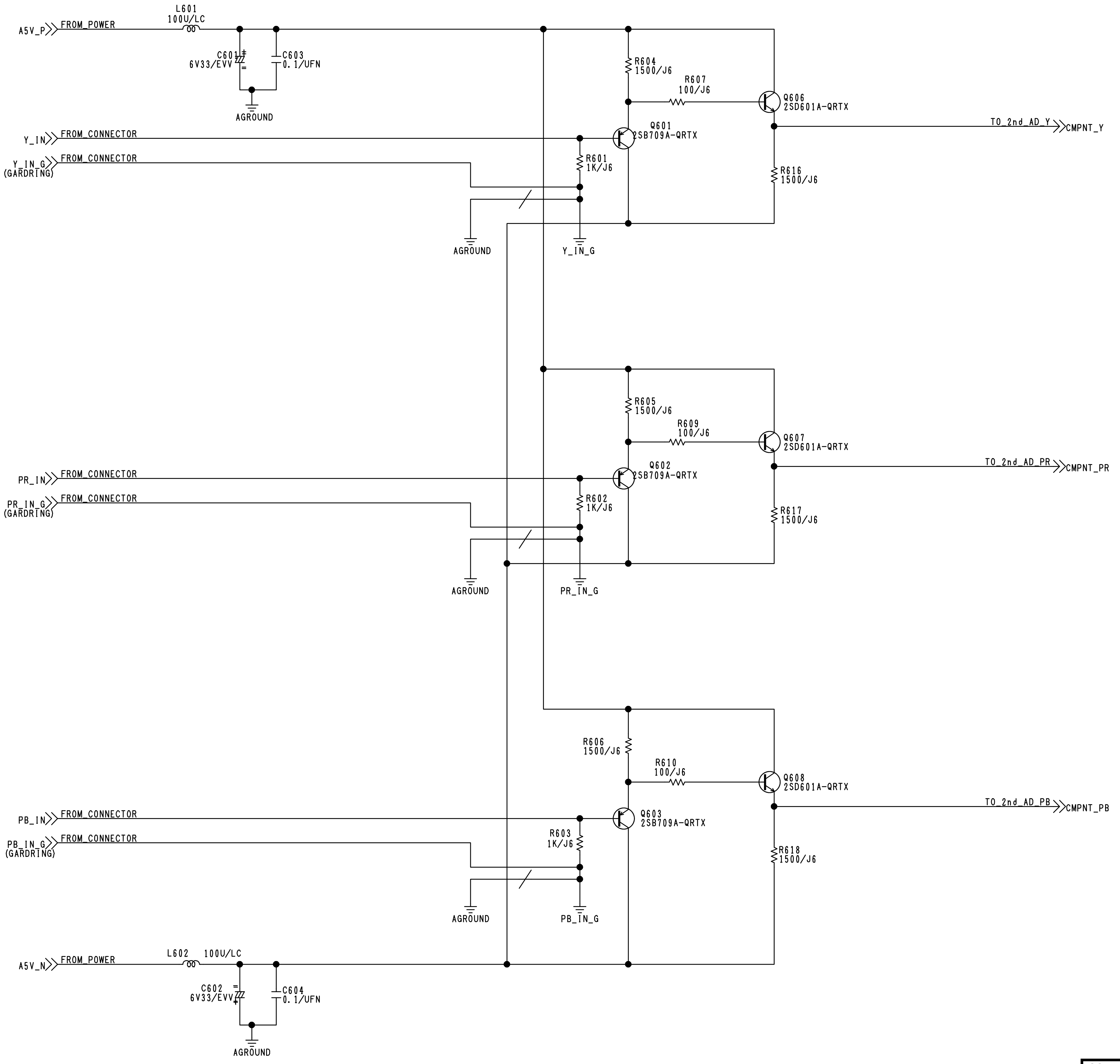
IC501
NJM78L05UAT2
IC502
NJM79L05UAT2
IC506
NJM78L05UAT2
IC503
AN91A12S
IC504
MC14538BF-R
IC505
AN3296S
IC507
MN53015VZW
QR501
MUN2212T1
Q501
2SD601A-QRTX
Q502
2SD601A-QRTX
D501
MA152WK-TX
D502
MA152K-TX
L501
390U/LB
A75V_P
FROM_POWER
A75V_N
FROM_POWER
RET_Y
FROM_2nd_AD_Y
RET_YD
FROM_2nd_AD_Y
VIN_A
TO_SYS_IF
SINH
FROM_SIF_DEC
TO_SYS_IF
VIN_D
TO_135M_PLL/SIF_DEC
COMP_SYNC
FROM_4fsc_PLL
FSC
FROM_SYS_IF
FRM_DET
TO_SYS_IF
VLOCK_L
TO_SYS_IF/135M_PLL
INP_FRM
FROM_SYS_IF
YC_L
TO_4fsc_PLL
YC_H
VCC
AGROUND
C510 16V47/EVV
C511 0.1/UFN
C512 0.1/UFN
C513 0.1/UFN
C514 0.1/UFN
C515 0.1/UFN
C516 27P/UN
C517 100P/UN
C518 0.1/UFN
C519 0.1/UFN
C520 6V33/EVV
C521 6V33/EVV
C522 PAT/UN
C524 0.01/UBN
C525 0.01/UBN
C526 82P/UN
C527 0.01/UBN
C528 0.01/UBN
C529 PAT/UBN
C530 0.01/UBN
C531 0.1/UFN
C532 0.1/UFN
C533 0.1/UFN
C534 0.1/UFN
C535 6V33/EVV
C536 0.068/UBN
C537 470P/UN
C538 50V1/EVV
C539 0.1/UFN
C540 50V4R7/EVV
C541 820P/UN
C542 6V33/EVV
C543 3900P/UBN
C544 1500P/UBN
C545 50VR68/EVV
C546 0.1/UFN
R131 22K/J6
R132 33K/J6
R133 560K/J6
R134 1000/J6
R135 68K/J6
R136 330/J6
R137 680K/J6
R138 75K/J6
R139 100K/J6
R140 10K/J6
R141 6800/J6
R142 15K/J6
R143 47K/J6
R530 1K/J6
R531 2200/J6
R534 220K/J6
R535 680K/J6
R536 10K/J6
R537 10K/J6
R538 10K/J6
R539 47K/J6
R540 PAT/J6
R541 10K/J6
R542 3900/J6
R546 1000/J6
R547 4700/J6
R548 0/J6
R550 PAT/J6
VIDEO
FB2
CLAMP
IOUT
IIN
C1
C2
FB1
FB0
VCC1
GND3
SG1
SG2
PG1
PG2
BIAS
INT
GND2
GND1
SYP
CX
RX
A
B
Q
SOUT
NSD
H-HK
VSS
VCR
VDOUT
VCC
VOC
GND
VIN
AFC_C
HD_OUT
NS_OUT
H-OSC
NC
P_OUT
SEA30O
RECEEO
SEA30I
RECEEI
INSYNC
ESYNC
EXTL
SYNCO
VPOUT
FPLUSO
FPLUSI
MCK
HSYNC
DO2
DO1
VDD2
VSS1
TST2
TST1
RECO
CF31I
PBO
CF30I
PSCTL
FG2
FG1
FONH
VREFG
VLCKL
ADVD
NFO
F30N
F30O
VDLO
VDLI
HH0
HH1
NYSCL
VDD1
VSS2
OPT1
MNTSCL
VREFO
VREFI
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	V IN FOR PAL (SYNC SEP)	11/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM124	

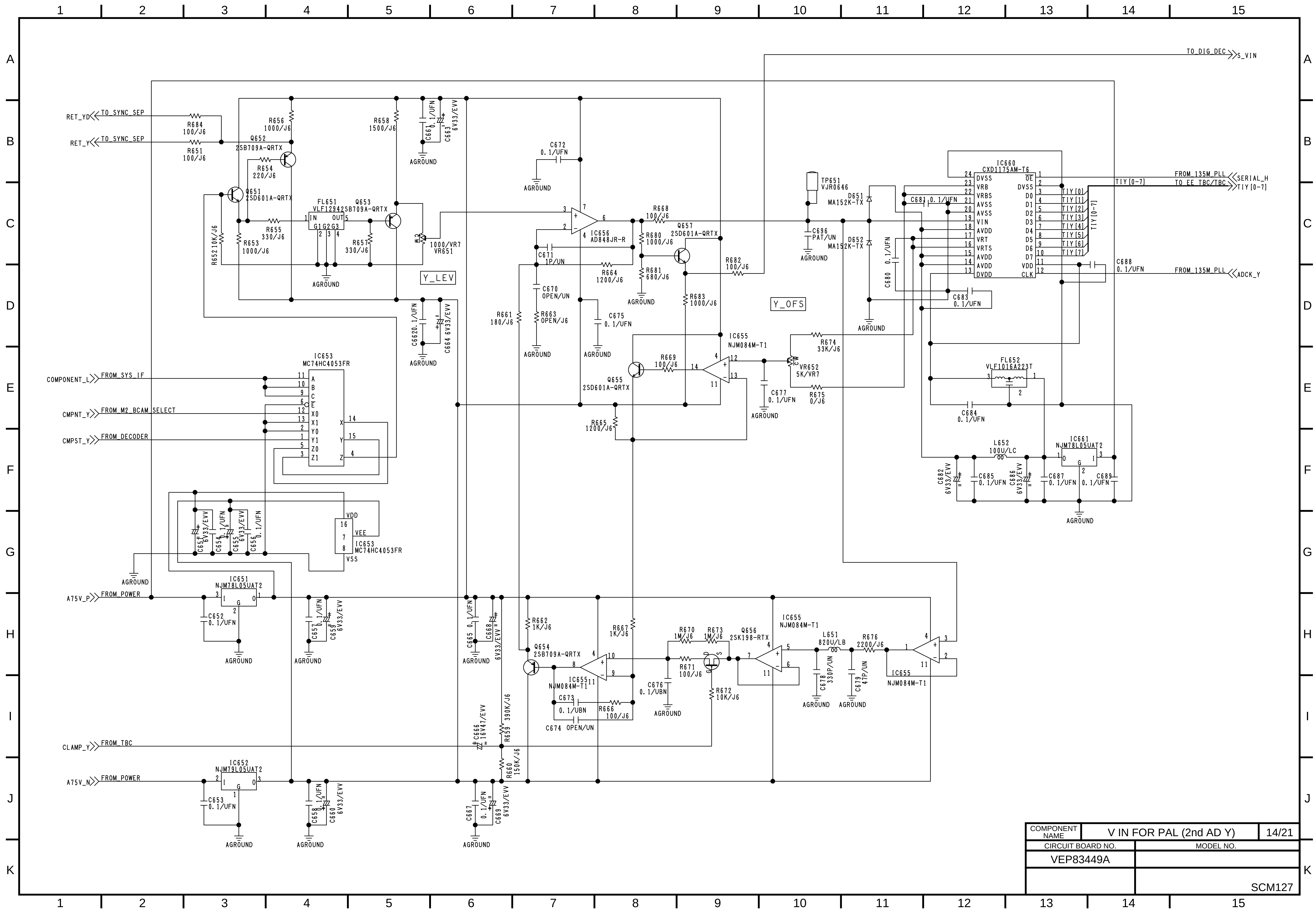

SYNC ϕ
PLL_OFS
PLL_POS
COMP_SYNC
FROM_SYNC_SEP
A5V_N
FROM_POWER
A5V_P
FROM_POWER
MIDW
FROM_TBC
PCST
FROM_TBC
INP_FRM
FROM_SYNC_SEP
HD
FROM_4fsc_PLL
FRMD
TO_4fsc_PLL
CLPT
FROM_GAIN_CNTRL
TO_1st_AD
CLP
SERIAL_L
FROM_SYS_IF
TO_2nd_AD_Y
ADCK_Y
TO_2nd_AD_PB,2nd_AD_PR
ADCK_PC
TO_4fsc_PLL
135M_CDEM
TO_EE_TBC/TBC
TBC_WCK
TO_TBC
TBC_WH
TO_EE_TBC/TBC
TBC_WV
TO_OUTBUFF
DET_H
TO_2nd_AD_PB/2nd_AD_Y
SERIAL_H
FL551
VLF1016A223T
FL552
VLF1016A223T
Q551
2SC3757-QRTX
Q552
2SA1226T2E34
Q553
2SA1226T2E34
Q554
2SC3757-QRTX
D551
MA152K-TX
D552
MA335-RTX
D553
MA152WA-TX
R551
10K/J6
R553
2200/J6
R554
6800/J6
R555
4700/J6
R556
1K/J6
R557
4700/J6
R558
4700/J6
R559
2200/J6
R560
2200/J6
R564
68K/J6
R565
5600/J6
R571
3300/J6
R572 6800/J6
R575 6800/J6
R579
22K/J6
R582
6800/J6
L551
3R3U/LA
C551
6V33/EVV
C553
47P/UN
C555
0.1/UFN
C557
47P/UN
C559
0.1/UFN
C561
1000P/UN
C563
0.1/UFN
C564
270P/UN
C565
470P/UN
C567
82P/UN
C570
0.1/UFN
C573
47P/UN
C575 OPEN/UN
2K/VR7
VR551
IC557
SN74LS221NSL
IC562
SN74LS221NSL
VL551
VLQ0415
IC551
MC74HC00AF-R
TP552
VJR0646
C552
6V33/EVV
C556
0.1/UFN
IC554
MC74HC74AF-R
C558
0.1/UFN
R552
22K/J6
C554
1000P/UN
IC552
TC4S584FT85L
R561
3300/J6
R563
15K/J6
C562
680P/UN
IC560
NJM082BM-T1
C566
0.1/UFN
R568 OPEN/J6
R566
680/J6
R569
OPEN/J6
C581
1000P/UN
IC561
TC4W53FTE12L
R573
1500/J6
VR552
5K/VR7
C568
1000P/UN
C569
0.1/UFN
R576
10K/J6
R574
1500/J6
R578
100K/J6
R580
OPEN/J6
R581
1500/J6
C579
50V1/EVN
C572
0.1/UFN
C576
0.1/UFN
C580
50V1/EVN
C578
0.01/UBN
TP553
VJR0646
TP551
VJR0646
IC567
MC74HC244AFR
C571
0.01/UBN
R577
100/J6
R583
0/J6
R567
0/J6
R562
15K/J6
C560
100P/UN
R586
0/J6
AGROUND

COMPONENT NAME	V IN FOR PAL (135M PLL)	12/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		

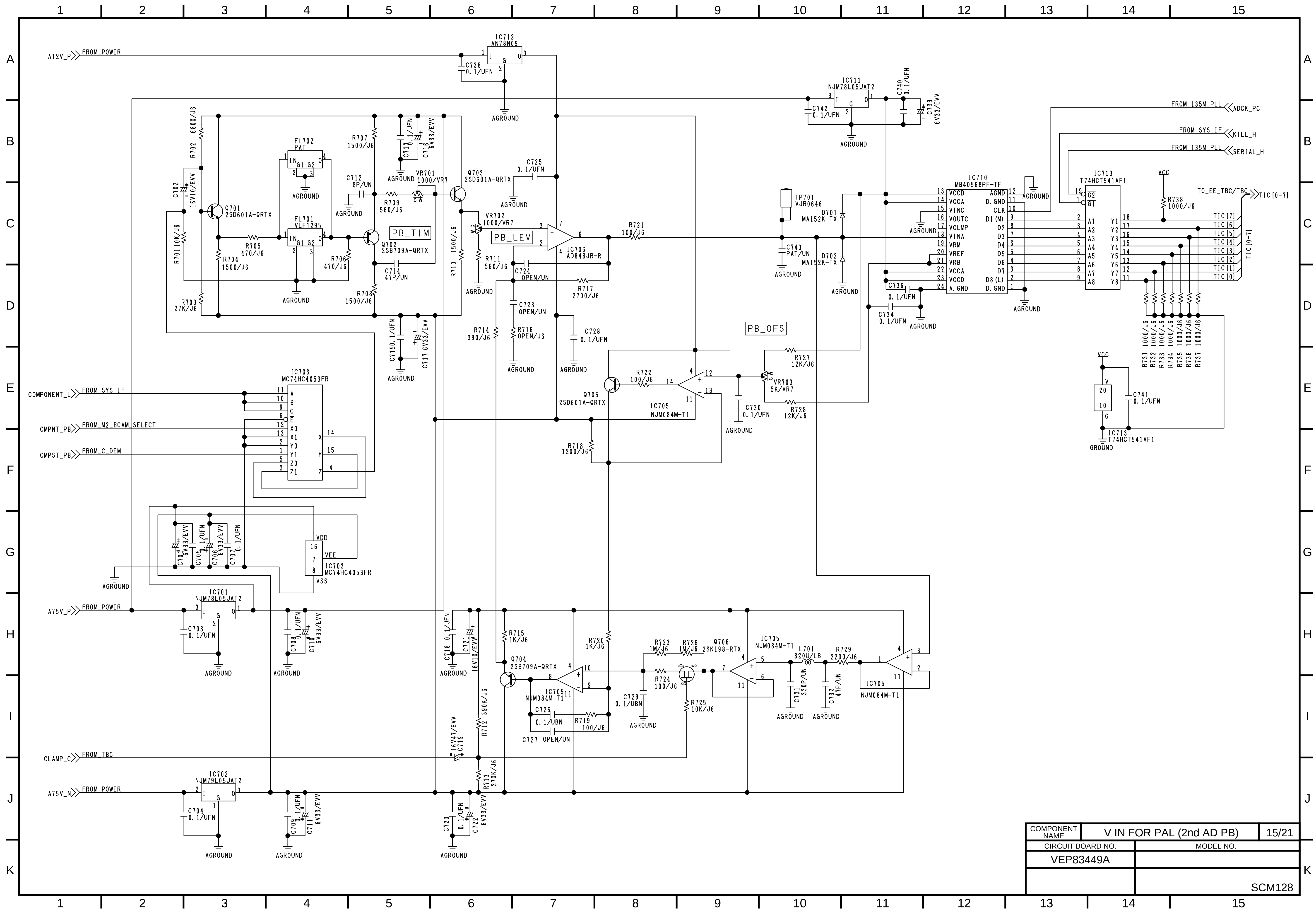
SCM125


A5V_P
FROM_POWER
L601
100U/LC
C601
6V33/EVV
C603
0.1/UFN
AGROUND
Y_IN
FROM_CONNECTOR
Y_IN_G
(GARDRING)
FROM_CONNECTOR
R604
1500/J6
R607
100/J6
Q606
2SD601A-QRTX
Q601
2SB709A-QRTX
R601
1K/J6
R616
1500/J6
TO_2nd_AD_Y
CMPNT_Y
AGROUND
Y_IN_G
R605
1500/J6
R609
100/J6
Q607
2SD601A-QRTX
Q602
2SB709A-QRTX
PR_IN
FROM_CONNECTOR
PR_IN_G
(GARDRING)
FROM_CONNECTOR
R602
1K/J6
R617
1500/J6
TO_2nd_AD_PR
CMPNT_PR
AGROUND
PR_IN_G
R606
1500/J6
R610
100/J6
Q608
2SD601A-QRTX
Q603
2SB709A-QRTX
PB_IN
FROM_CONNECTOR
PB_IN_G
(GARDRING)
FROM_CONNECTOR
R603
1K/J6
R618
1500/J6
TO_2nd_AD_PB
CMPNT_PB
AGROUND
PB_IN_G
A5V_N
FROM_POWER
L602
100U/LC
C602
6V33/EVV
C604
0.1/UFN
AGROUND

COMPONENT NAME	V IN FOR PAL (M2 BCAM SELECT)	13/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM126	

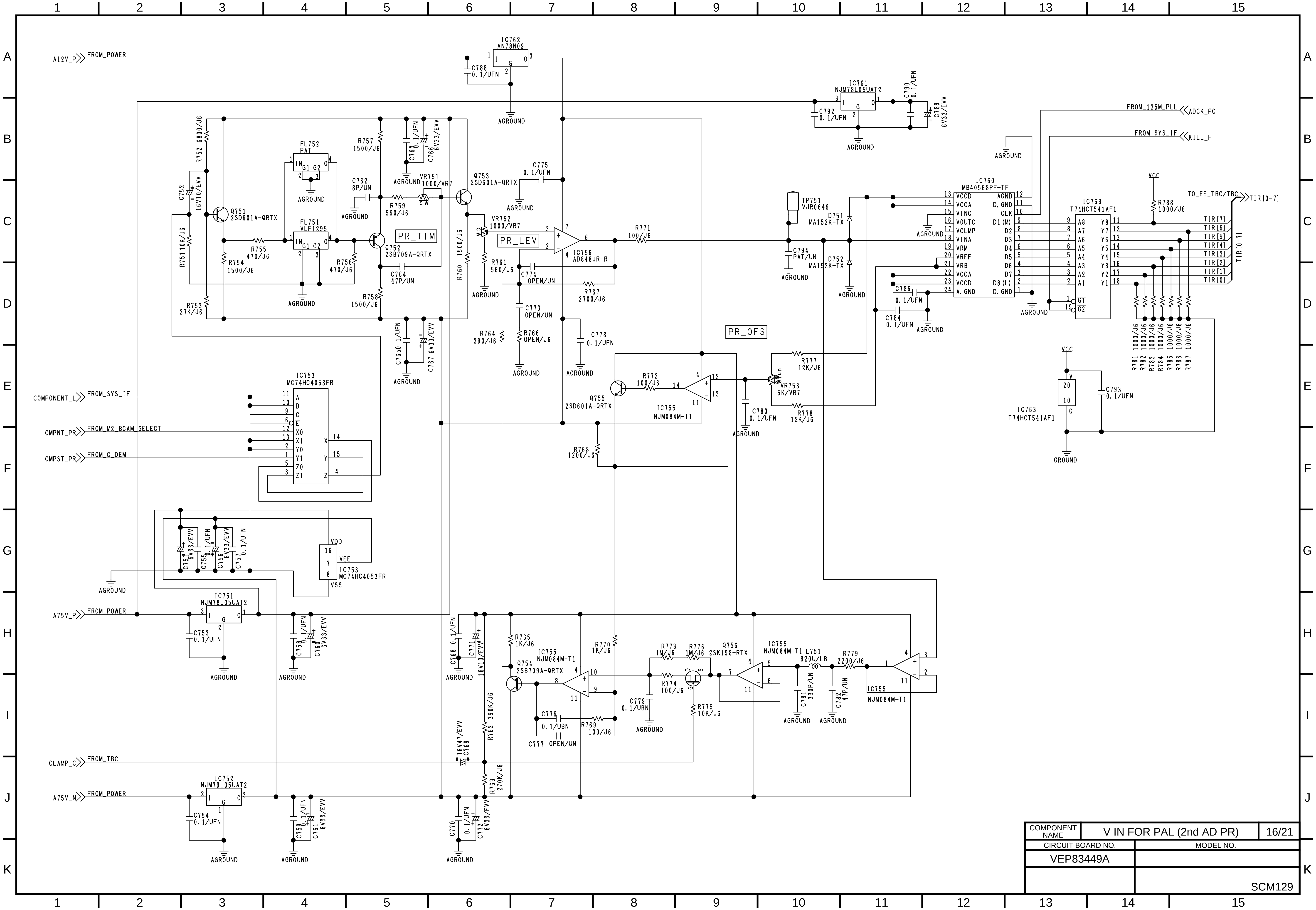

TO_DIG_DEC
S_VIN
RET_YD
TO_SYNC_SEP
R684
100/J6
RET_Y
TO_SYNC_SEP
R651
100/J6
Q652
2SB709A-QRTX
R656
1000/J6
R654
220/J6
Q651
2SD601A-QRTX
R652 10K/J6
R653
1000/J6
R655
330/J6
FL651
VLF12942
IN
OUT
G1 G2 G3
AGROUND
Q653
2SB709A-QRTX
R657
330/J6
R658
1500/J6
C661
0.1/UFN
C663
6V33/EVV
1000/VR7
VR651
Y_LEV
C662
0.1/UFN
C664
6V33/EVV
C672
0.1/UFN
IC656
AD848JR-R
C671
1P/UN
R664
1200/J6
C670
OPEN/UN
R661
180/J6
R663
OPEN/J6
C675
0.1/UFN
R668
100/J6
R680
1000/J6
R681
680/J6
Q657
2SD601A-QRTX
R682
100/J6
R683
1000/J6
Q655
2SD601A-QRTX
R669
100/J6
IC655
NJM084M-T1
C677
0.1/UFN
R665
1200/J6
Y_OFS
TP651
VJR0646
C696
PAT/UN
D651
MA152K-TX
D652
MA152K-TX
C680
0.1/UFN
R674
33K/J6
VR652
5K/VR7
R675
0/J6
IC660
CXD1175AM-T6
DVSS
VRB
VRBS
AVSS
AVSS
VIN
AVDD
VRT
VRTS
AVDD
AVDD
DVDD
OE
DVSS
D0
D1
D2
D3
D4
D5
D6
D7
VDD
CLK
C681 0.1/UFN
C683
0.1/UFN
TIY[0]
TIY[1]
TIY[2]
TIY[3]
TIY[4]
TIY[5]
TIY[6]
TIY[7]
TIY[0-7]
FROM_135M_PLL
SERIAL_H
TO_EE_TBC/TBC
TIY[0-7]
C688
0.1/UFN
FROM_135M_PLL
ADCK_Y
FL652
VLF1016A223T
C684
0.1/UFN
L652
100U/LC
IC661
NJM78L05UAT2
C682
6V33/EVV
C685
0.1/UFN
C686
6V33/EVV
C687
0.1/UFN
C689
0.1/UFN
COMPONENT_L
FROM_SYS_IF
CMPNT_Y
FROM_M2_BCAM_SELECT
CMPST_Y
FROM_DECODER
IC653
MC74HC4053FR
A
B
C
E
X0
X1
Y0
Y1
Z0
Z1
X
Y
Z
VDD
VEE
VSS
C651
6V33/EVV
C654
0.1/UFN
C655
6V33/EVV
C656
0.1/UFN
A75V_P
FROM_POWER
IC651
NJM78L05UAT2
C652
0.1/UFN
C657
0.1/UFN
C659
6V33/EVV
C665
0.1/UFN
C668
6V33/EVV
R662
1K/J6
Q654
2SB709A-QRTX
IC655
NJM084M-T1
C673
0.1/UBN
R666
100/J6
C674
OPEN/UN
R667
1K/J6
R670
1M/J6
R673
1M/J6
R671
100/J6
C676
0.1/UBN
Q656
2SK198-RTX
R672
10K/J6
IC655
NJM084M-T1
L651
820U/LB
C678
330P/UN
C679
47P/UN
R676
2200/J6
IC655
NJM084M-T1
CLAMP_Y
FROM_TBC
C666
16V47/EVV
R659
390K/J6
R660
150K/J6
A75V_N
FROM_POWER
IC652
NJM79L05UAT2
C653
0.1/UFN
C658
0.1/UFN
C660
6V33/EVV
C667
0.1/UFN
C669
6V33/EVV
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	V IN FOR PAL (2nd AD Y)	14/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM127	

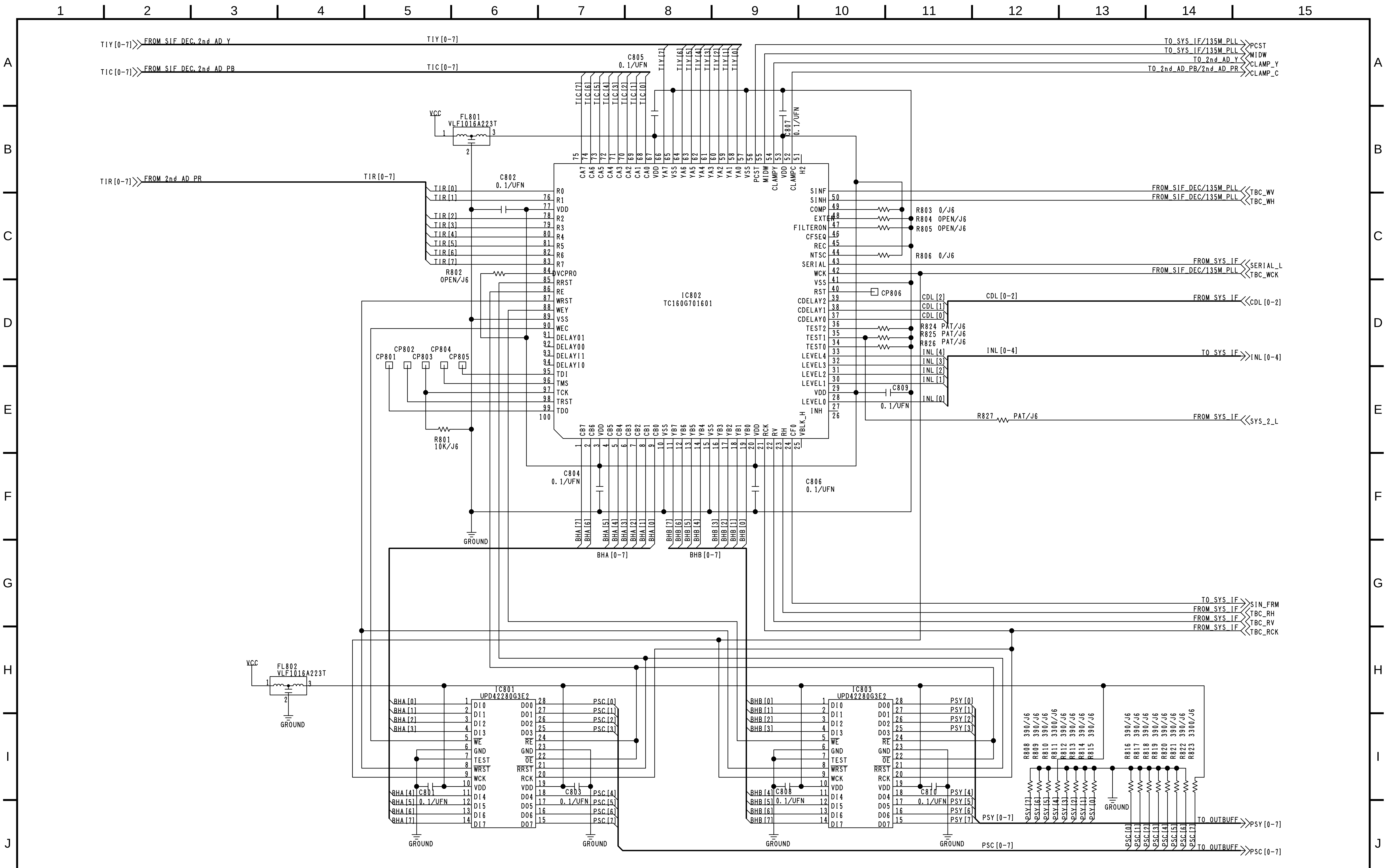

A12V_P
FROM_POWER
IC712
AN78N09
C738
0.1/UFN
AGROUND
IC711
NJM78L05UAT2
C742
0.1/UFN
C740
0.1/UFN
C739
6V33/EVV
FROM_135M_PLL
ADCK_PC
FROM SYS_IF
KILL_H
FROM_135M_PLL
SERIAL_H
R702
6800/J6
FL702
PAT
R707
1500/J6
C713
0.1/UFN
C716
6V33/EVV
C712
8P/UN
R709
560/J6
VR701
1000/VR7
Q703
2SD601A-QRTX
C725
0.1/UFN
C702
16V10/EVV
Q701
2SD601A-QRTX
FL701
VLF1295
Q702
2SB709A-QRTX
PB_TIM
VR702
1000/VR7
IC706
AD848JR-R
PB_LEV
R721
100/J6
TP701
VJR0646
D701
MA152K-TX
D702
MA152K-TX
C743
PAT/UN
IC710
MB40568PF-TF
IC713
T74HCT541AF1
VCC
R738
1000/J6
TO_EE_TBC/TBC
TIC[0-7]
TIC[7]
TIC[6]
TIC[5]
TIC[4]
TIC[3]
TIC[2]
TIC[1]
TIC[0]
R701
10K/J6
R705
470/J6
R704
1500/J6
R706
470/J6
C714
47P/UN
R710
1500/J6
R711
560/J6
C724
OPEN/UN
R717
2700/J6
C736
0.1/UFN
C734
0.1/UFN
R703
27K/J6
R708
1500/J6
C715
0.1/UFN
C717
6V33/EVV
R714
390/J6
C723
OPEN/UN
R716
OPEN/J6
C728
0.1/UFN
PB_OFS
R727
12K/J6
VR703
5K/VR7
R728
12K/J6
R731
R732
R733
R734
R735
R736
R737
1000/J6
IC703
MC74HC4053FR
COMPONENT_L
FROM_SYS_IF
CMPNT_PB
FROM_M2_BCAM_SELECT
CMPST_PB
FROM_C_DEM
Q705
2SD601A-QRTX
R722
100/J6
IC705
NJM084M-T1
C730
0.1/UFN
R718
1200/J6
C741
0.1/UFN
GROUND
C704
C705
C706
C707
6V33/EVV
0.1/UFN
VDD
VEE
VSS
IC701
NJM78L05UAT2
A75V_P
FROM_POWER
C703
0.1/UFN
C708
0.1/UFN
C710
6V33/EVV
C718
0.1/UFN
C721
16V10/EVV
R715
1K/J6
Q704
2SB709A-QRTX
R720
1K/J6
R723
1M/J6
R726
1M/J6
Q706
2SK198-RTX
L701
820U/LB
R729
2200/J6
R724
100/J6
C729
0.1/UBN
R725
10K/J6
C731
330P/UN
C732
47P/UN
C726
0.1/UBN
R719
100/J6
C727
OPEN/UN
R712
390K/J6
C719
16V47/EVV
CLAMP_C
FROM_TBC
R713
270K/J6
IC702
NJM79L05UAT2
A75V_N
FROM_POWER
C709
0.1/UFN
C711
6V33/EVV
C720
0.1/UFN
C722
6V33/EVV

COMPONENT NAME	V IN FOR PAL (2nd AD PB)	15/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		

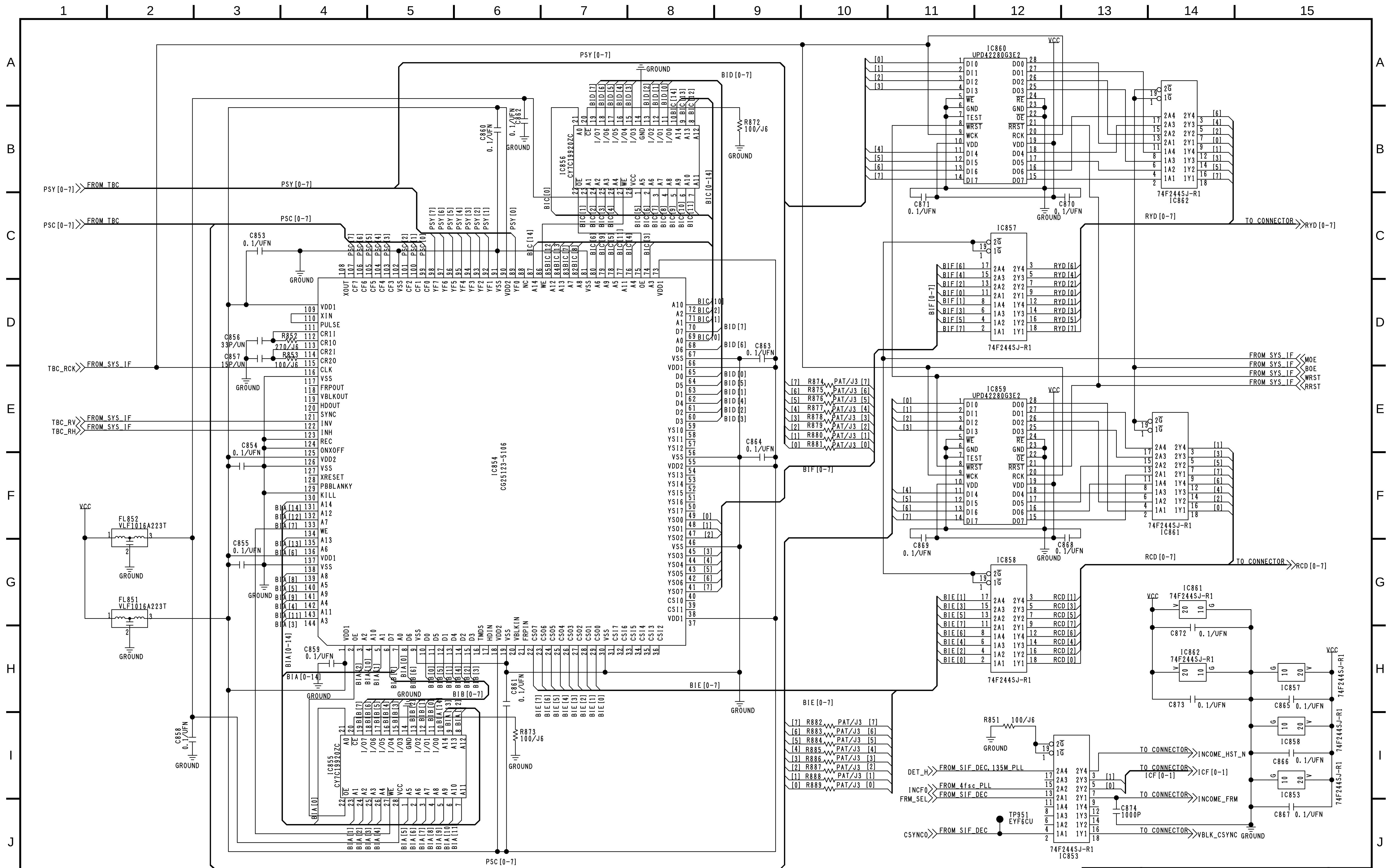
SCM128


A12V_P
FROM_POWER
IC762
AN78N09
C788
0.1/UFN
AGROUND
IC761
NJM78L05UAT2
C792
0.1/UFN
C790
0.1/UFN
C789
6V33/EVV
R752 6800/J6
C752
16V10/EVV
Q751
2SD601A-QRTX
R751 10K/J6
R753
27K/J6
FL752
PAT
FL751
VLF1295
R755
470/J6
R754
1500/J6
R756
470/J6
R757
1500/J6
R758
1500/J6
C762
8P/UN
R759
560/J6
VR751
1000/VR7
C763
0.1/UFN
C766
6V33/EVV
Q752
2SB709A-QRTX
C764
47P/UN
PR_TIM
Q753
2SD601A-QRTX
VR752
1000/VR7
R760 1500/J6
R761
560/J6
PR_LEV
C775
0.1/UFN
IC756
AD848JR-R
C774
OPEN/UN
R767
2700/J6
C773
OPEN/UN
R766
OPEN/J6
R764
390/J6
C778
0.1/UFN
R771
100/J6
C765 0.1/UFN
C767 6V33/EVV
PR_OFS
TP751
VJR0646
D751
MA152K-TX
D752
MA152K-TX
C794
PAT/UN
IC760
MB40568PF-TF
VCCD
VCCA
VINC
VOUTC
VCLMP
VINA
VRM
VREF
VRB
VCCA
VCCD
A.GND
AGND
D.GND
CLK
D1(M)
D2
D3
D4
D5
D6
D7
D8(L)
D.GND
C786
0.1/UFN
C784
0.1/UFN
FROM_135M_PLL
ADCK_PC
FROM_SYS_IF
KILL_H
IC763
T74HCT541AF1
VCC
R788
1000/J6
TO_EE_TBC/TBC
TIR[0-7]
TIR[7]
TIR[6]
TIR[5]
TIR[4]
TIR[3]
TIR[2]
TIR[1]
TIR[0]
R781 1000/J6
R782 1000/J6
R783 1000/J6
R784 1000/J6
R785 1000/J6
R786 1000/J6
R787 1000/J6
C793
0.1/UFN
GROUND
R777
12K/J6
VR753
5K/VR7
R778
12K/J6
C780
0.1/UFN
R772
100/J6
Q755
2SD601A-QRTX
IC755
NJM084M-T1
R768
1200/J6
IC753
MC74HC4053FR
COMPONENT_L
FROM_SYS_IF
CMPNT_PR
FROM_M2_BCAM_SELECT
CMPST_PR
FROM_C_DEM
C751
6V33/EVV
C755
0.1/UFN
C756
6V33/EVV
C757
0.1/UFN
VDD
VEE
VSS
A75V_P
FROM_POWER
IC751
NJM78L05UAT2
C753
0.1/UFN
C758
0.1/UFN
C760
6V33/EVV
C768 0.1/UFN
C771
16V10/EVV
R765
1K/J6
Q754
2SB709A-QRTX
R770
1K/J6
R773
1M/J6
R776
1M/J6
Q756
2SK198-RTX
L751
820U/LB
R779
2200/J6
R774
100/J6
R775
10K/J6
C779
0.1/UBN
C781
330P/UN
C782
47P/UN
C776
0.1/UBN
R769
100/J6
C777 OPEN/UN
R762 390K/J6
C769
16V47/EVV
CLAMP_C
FROM_TBC
R763
270K/J6
A75V_N
IC752
NJM79L05UAT2
C754
0.1/UFN
C759
0.1/UFN
C761
6V33/EVV
C770
0.1/UFN
C772
6V33/EVV

COMPONENT NAME	V IN FOR PAL (2nd AD PR)	16/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM129	

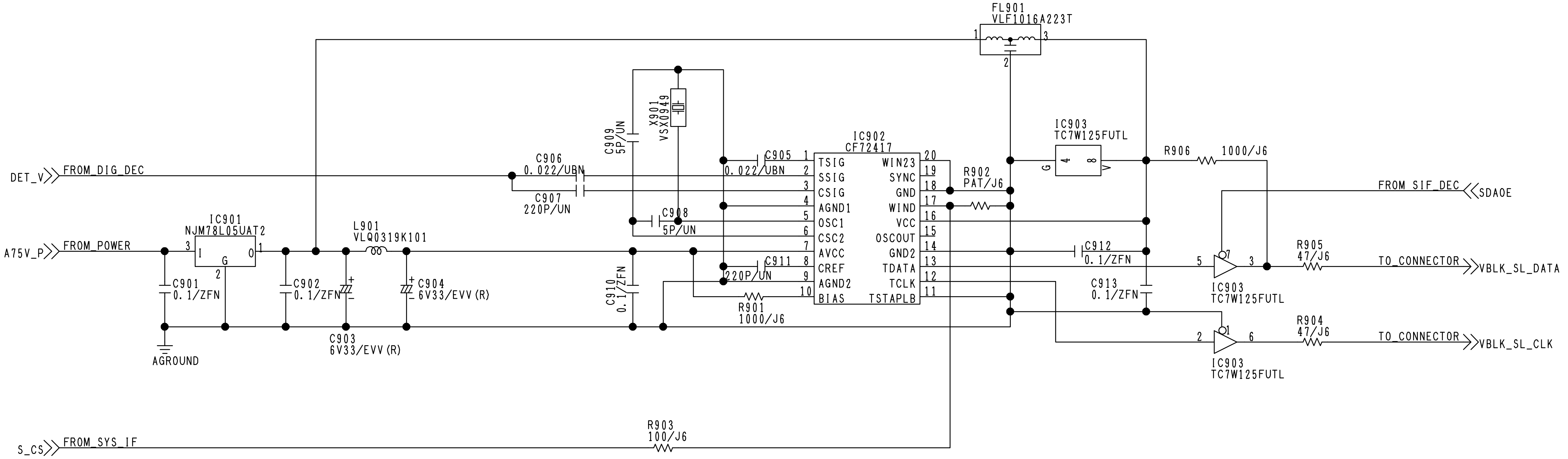

TIY[0-7] FROM SIF DEC 2nd AD Y
TIC[0-7] FROM SIF DEC 2nd AD PB
TIR[0-7] FROM 2nd AD PR
C805 0.1/UFN
C807 0.1/UFN
FL801 VLF1016A223T
VCC
C802 0.1/UFN
R802 OPEN/J6
IC802 TC160G701601
CP801
CP802
CP803
CP804
CP805
CP806
R801 10K/J6
C804 0.1/UFN
C806 0.1/UFN
C809 0.1/UFN
GROUND
R803 0/J6
R804 OPEN/J6
R805 OPEN/J6
R806 0/J6
R824 PAT/J6
R825 PAT/J6
R826 PAT/J6
R827 PAT/J6
TO SYS IF/135M PLL PCST
TO SYS IF/135M PLL MIDW
TO 2nd AD Y CLAMP_Y
TO 2nd AD PB/2nd AD PR CLAMP_C
FROM SIF DEC/135M PLL TBC_WV
FROM SIF DEC/135M PLL TBC_WH
FROM SYS IF SERIAL_L
FROM SIF DEC/135M PLL TBC_WCK
CDL[0-2] FROM SYS IF CDL[0-2]
INL[0-4] TO SYS IF INL[0-4]
FROM SYS IF SYS_2_L
BHA[0-7]
BHB[0-7]
TO SYS IF SIN_FRM
FROM SYS IF TBC_RH
FROM SYS IF TBC_RV
FROM SYS IF TBC_RCK
FL802 VLF1016A223T
IC801 UPD42280G3E2
IC803 UPD42280G3E2
C801 0.1/UFN
C803 0.1/UFN
C808 0.1/UFN
C810 0.1/UFN
R808 390/J6
R809 390/J6
R810 390/J6
R811 3300/J6
R812 390/J6
R813 390/J6
R814 390/J6
R815 390/J6
R816 390/J6
R817 390/J6
R818 390/J6
R819 390/J6
R820 390/J6
R821 390/J6
R822 390/J6
R823 3300/J6
PSY[0-7] TO OUTBUFF PSY[0-7]
PSC[0-7] TO OUTBUFF PSC[0-7]

COMPONENT NAME	V IN FOR PAL (TBC)	17/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM130	

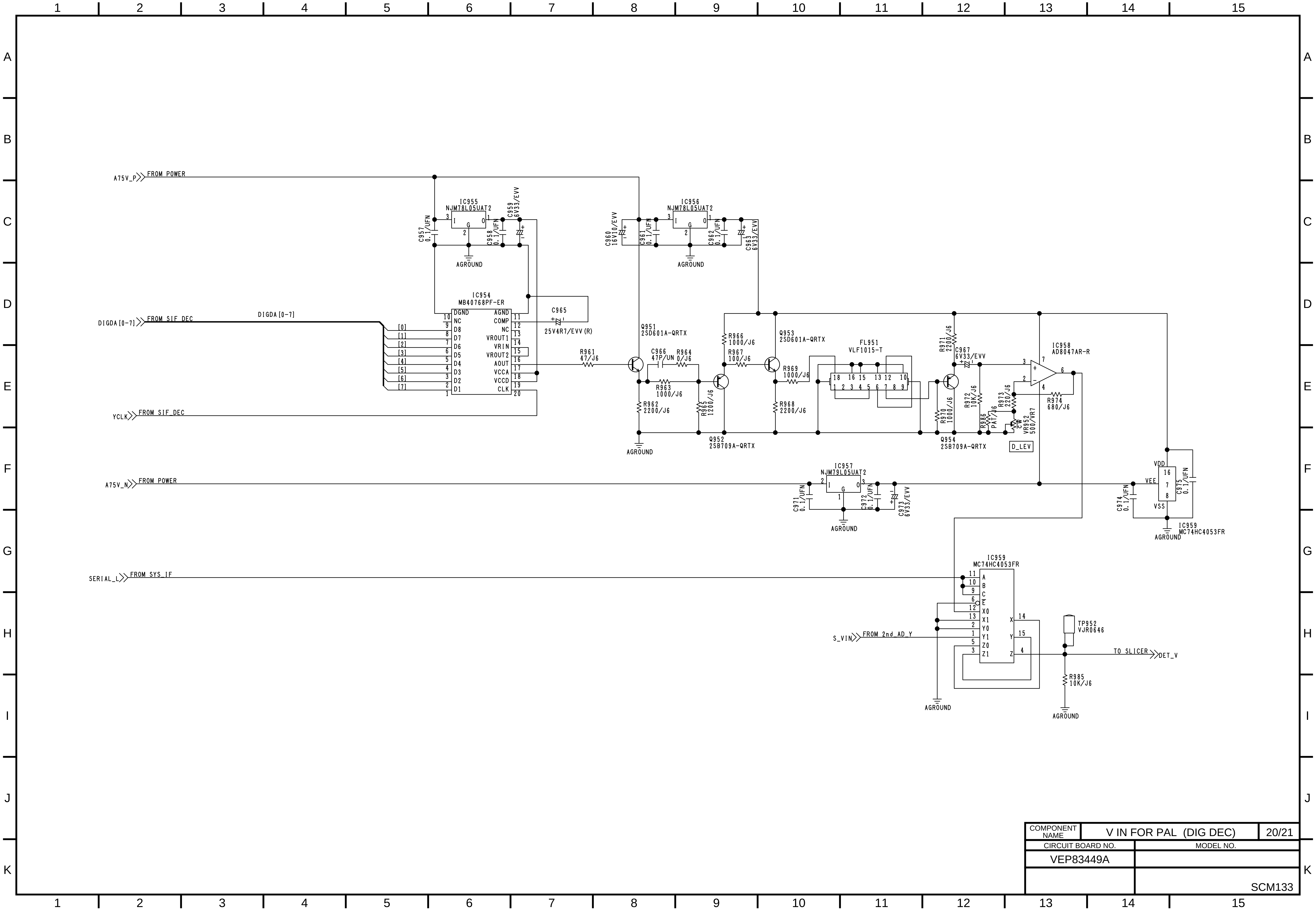

PSY[0-7] FROM TBC
PSC[0-7] FROM TBC
TBC_RCK FROM SYS_IF
TBC_RV FROM SYS_IF
TBC_RH FROM SYS_IF
IC854
CG25123-5106
IC856
CY7C199Z0ZC
IC855
CY7C199Z0ZC
IC860
UPD42280G3E2
IC859
UPD42280G3E2
IC862
IC861
IC857
IC858
IC853
74F244SJ-R1
RYD[0-7] TO CONNECTOR
RCD[0-7] TO CONNECTOR
MOE FROM SYS_IF
BOE FROM SYS_IF
WRST FROM SYS_IF
RRST FROM SYS_IF
BIA[0-14]
BIB[0-7]
BIC[0-14]
BID[0-7]
BIE[0-7]
BIF[0-7]
R872 100/J6
R873 100/J6
R852 270/J6
R853 100/J6
R851 100/J6
R874–R881 PAT/J3
R882–R889 PAT/J3
C853 0.1/UFN
C854 0.1/UFN
C855 0.1/UFN
C856 33P/UN
C857 15P/UN
C858 0.1/UFN
C859 0.1/UFN
C860 0.1/UFN
C861 0.1/UFN
C862 0.1/UFN
C863 0.1/UFN
C864 0.1/UFN
C865 0.1/UFN
C866 0.1/UFN
C867 0.1/UFN
C868 0.1/UFN
C869 0.1/UFN
C870 0.1/UFN
C871 0.1/UFN
C872 0.1/UFN
C873 0.1/UFN
C874 1000P
FL852 VLF1016A223T
FL851 VLF1016A223T
VCC
GROUND
DET_H FROM SIF_DEC_135M_PLL
INCF0 FROM 4fsc_PLL
FRM_SEL FROM SIF_DEC
CSYNC0 FROM SIF_DEC
TP951 EYF6CU
INCOME_HST_N TO CONNECTOR
ICF[0-1] TO CONNECTOR
INCOME_FRM TO CONNECTOR
VBLK_CSYNC TO CONNECTOR

COMPONENT NAME	V IN FOR PAL (OUT BUFF)	18/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		

SCM131

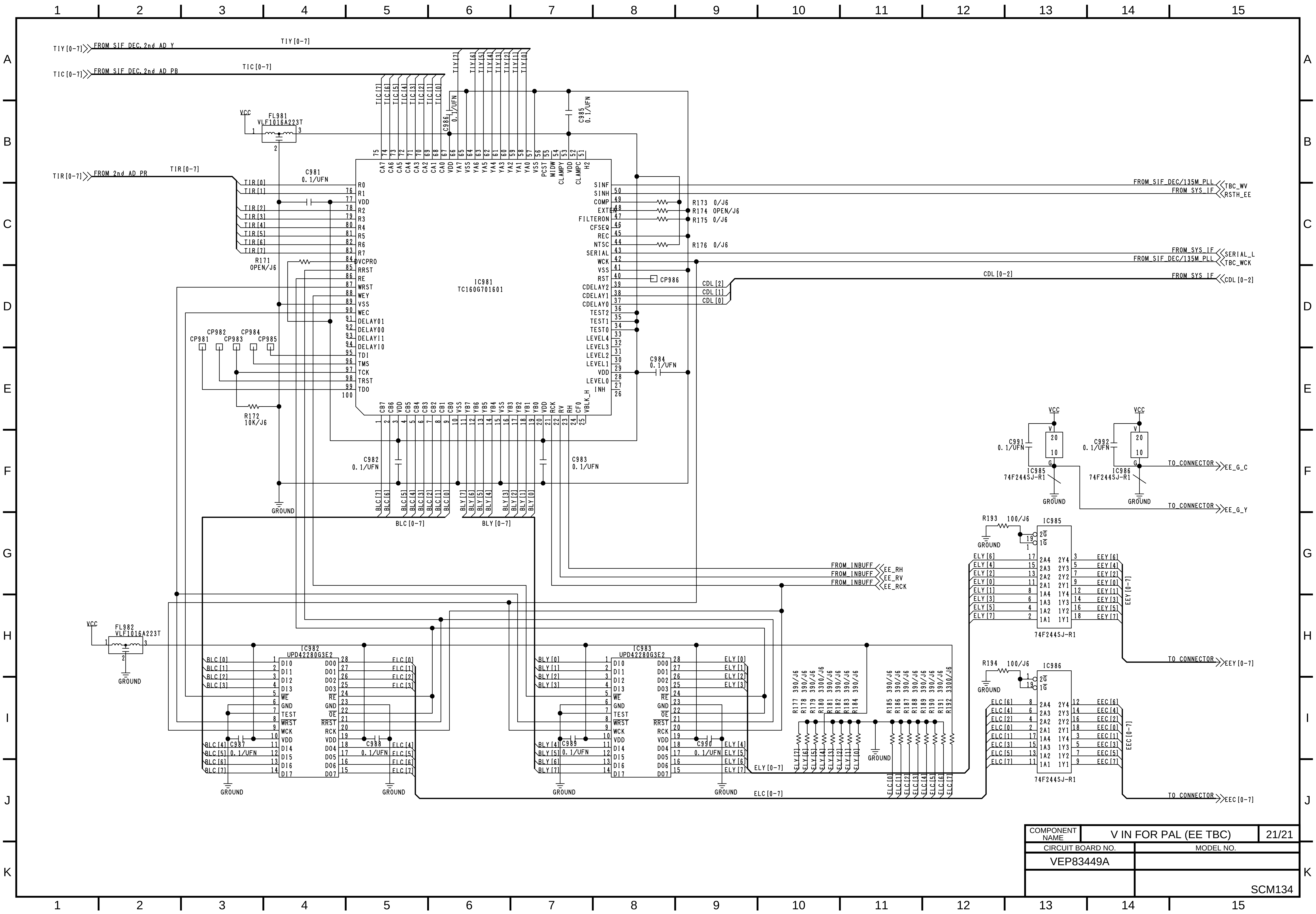

DET_V
FROM_DIG_DEC
A75V_P
FROM_POWER
S_CS
FROM_SYS_IF
IC901
NJM78L05UAT2
3
I
G
O
1
2
C901
0.1/ZFN
C902
0.1/ZFN
C903
6V33/EVV(R)
C904
6V33/EVV(R)
L901
VLQ0319K101
AGROUND
C906
0.022/UBN
C907
220P/UN
C909
5P/UN
X901
VSX0949
C908
5P/UN
C910
0.1/ZFN
C905
0.022/UBN
C911
220P/UN
R901
1000/J6
R903
100/J6
IC902
CF72417
1 TSIG
2 SSIG
3 CSIG
4 AGND1
5 OSC1
6 CSC2
7 AVCC
8 CREF
9 AGND2
10 BIAS
20 WIN23
19 SYNC
18 GND
17 WIND
16 VCC
15 OSCOUT
14 GND2
13 TDATA
12 TCLK
11 TSTAPLB
R902
PAT/J6
FL901
VLF1016A223T
1
2
3
IC903
TC7W125FUTL
G
4
8
V
R906
1000/J6
C912
0.1/ZFN
C913
0.1/ZFN
FROM SIF_DEC
SDAOE
5
7
3
2
1
6
IC903
TC7W125FUTL
IC903
TC7W125FUTL
R905
47/J6
R904
47/J6
TO_CONNECTOR
VBLK_SL_DATA
TO_CONNECTOR
VBLK_SL_CLK

COMPONENT NAME	V IN FOR PAL (SLICER)	19/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM132	



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
A75V_P
FROM POWER
IC955
NJM78L05UAT2
I G O
C957 0.1/UFN
C958 0.1/UFN
C959 6V33/EVV
AGROUND
IC956
NJM78L05UAT2
C960 16V10/EVV
C961 0.1/UFN
C962 0.1/UFN
C963 6V33/EVV
AGROUND
IC954
MB40768PF-ER
DGND AGND
NC COMP
D8 NC
D7 VROUT1
D6 VRIN
D5 VROUT2
D4 AOUT
D3 VCCA
D2 VCCD
D1 CLK
C965
25V4R7/EVV(R)
DIGDA[0-7]
FROM SIF DEC
DIGDA[0-7]
[0]
[1]
[2]
[3]
[4]
[5]
[6]
[7]
YCLK
FROM SIF DEC
R961 47/J6
Q951 2SD601A-QRTX
C966 47P/UN
R964 0/J6
R963 1000/J6
R962 2200/J6
R965 1200/J6
AGROUND
Q952 2SB709A-QRTX
R966 1000/J6
R967 100/J6
Q953 2SD601A-QRTX
R969 1000/J6
R968 2200/J6
FL951
VLF1015-T
18 16 15 13 12 10
1 2 3 4 5 6 7 8 9
R971 2200/J6
C967 6V33/EVV
Q954 2SB709A-QRTX
R970 1000/J6
R972 10K/J6
R986 PAT/J6
R973 220/J6
VR952 500/VR7
D_LEV
IC958
AD8047AR-R
R974 680/J6
A75V_N
FROM POWER
IC957
NJM79L05UAT2
C971 0.1/UFN
C972 0.1/UFN
C973 6V33/EVV
AGROUND
VDD
VEE
VSS
16 7 8
C974 0.1/UFN
C975 0.1/UFN
IC959
MC74HC4053FR
AGROUND
SERIAL_L
FROM SYS_IF
IC959
MC74HC4053FR
A B C E X0 X1 Y0 Y1 Z0 Z1
X Y Z
S_VIN
FROM 2nd_AD_Y
TP952
VJR0646
TO SLICER
DET_V
R985 10K/J6
AGROUND
AGROUND

COMPONENT NAME	V IN FOR PAL (DIG DEC)	20/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		
	SCM133	

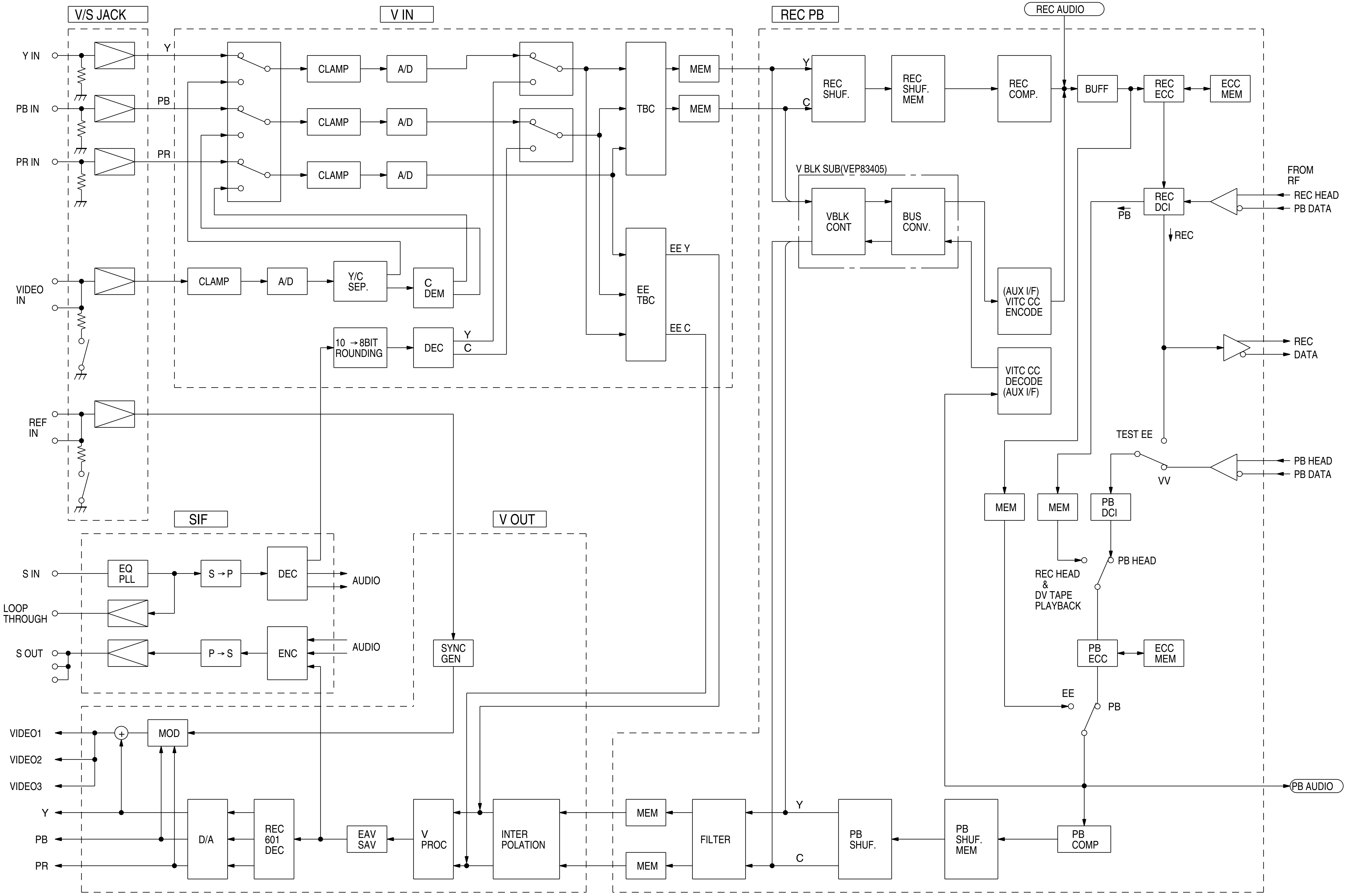


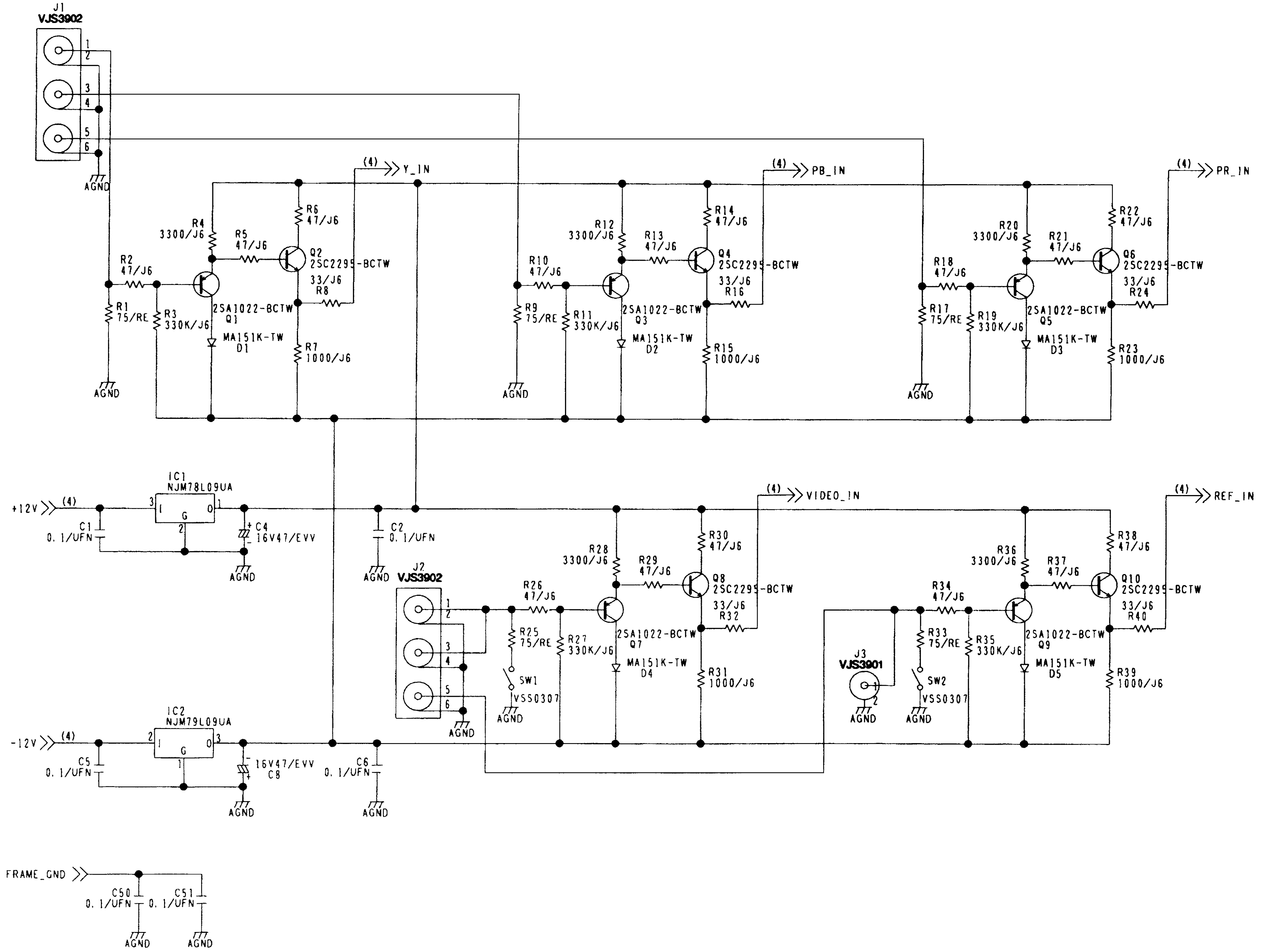
TIY [0-7] FROM SIF DEC.2nd AD Y
TIC [0-7] FROM SIF DEC.2nd AD PB
TIR [0-7] FROM 2nd AD PR
VCC
FL981
VLF1016A223T
C981
0.1/UFN
C986
0.1/UFN
C985
0.1/UFN
R171
OPEN/J6
CP981
CP982
CP983
CP984
CP985
R172
10K/J6
GROUND
IC981
TC160G701601
R173 0/J6
R174 OPEN/J6
R175 0/J6
R176 0/J6
CP986
C984
0.1/UFN
C982
0.1/UFN
C983
0.1/UFN
FROM SIF DEC/135M PLL TBC_WV
FROM SYS IF RSTH_EE
FROM SYS IF SERIAL_L
FROM SIF DEC/135M PLL TBC_WCK
CDL [0-2]
FROM SYS IF CDL [0-2]
BLC [0-7]
BLY [0-7]
FROM INBUFF EE_RH
FROM INBUFF EE_RV
FROM INBUFF EE_RCK
FL982
VLF1016A223T
IC982
UPD42280G3E2
IC983
UPD42280G3E2
C987
0.1/UFN
C988
0.1/UFN
C989
0.1/UFN
C990
0.1/UFN
ELY [0-7]
ELC [0-7]
R177 390/J6
R178 390/J6
R179 390/J6
R180 3300/J6
R181 390/J6
R182 390/J6
R183 390/J6
R184 390/J6
R185 390/J6
R186 390/J6
R187 390/J6
R188 390/J6
R189 390/J6
R190 390/J6
R191 390/J6
R192 3300/J6
C991
0.1/UFN
C992
0.1/UFN
IC985
74F244SJ-R1
IC986
74F244SJ-R1
TO CONNECTOR EE_G_C
TO CONNECTOR EE_G_Y
R193 100/J6
R194 100/J6
EEY [0-7]
TO CONNECTOR EEY [0-7]
EEC [0-7]
TO CONNECTOR EEC [0-7]

COMPONENT NAME	V IN FOR PAL (EE TBC)	21/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP83449A		

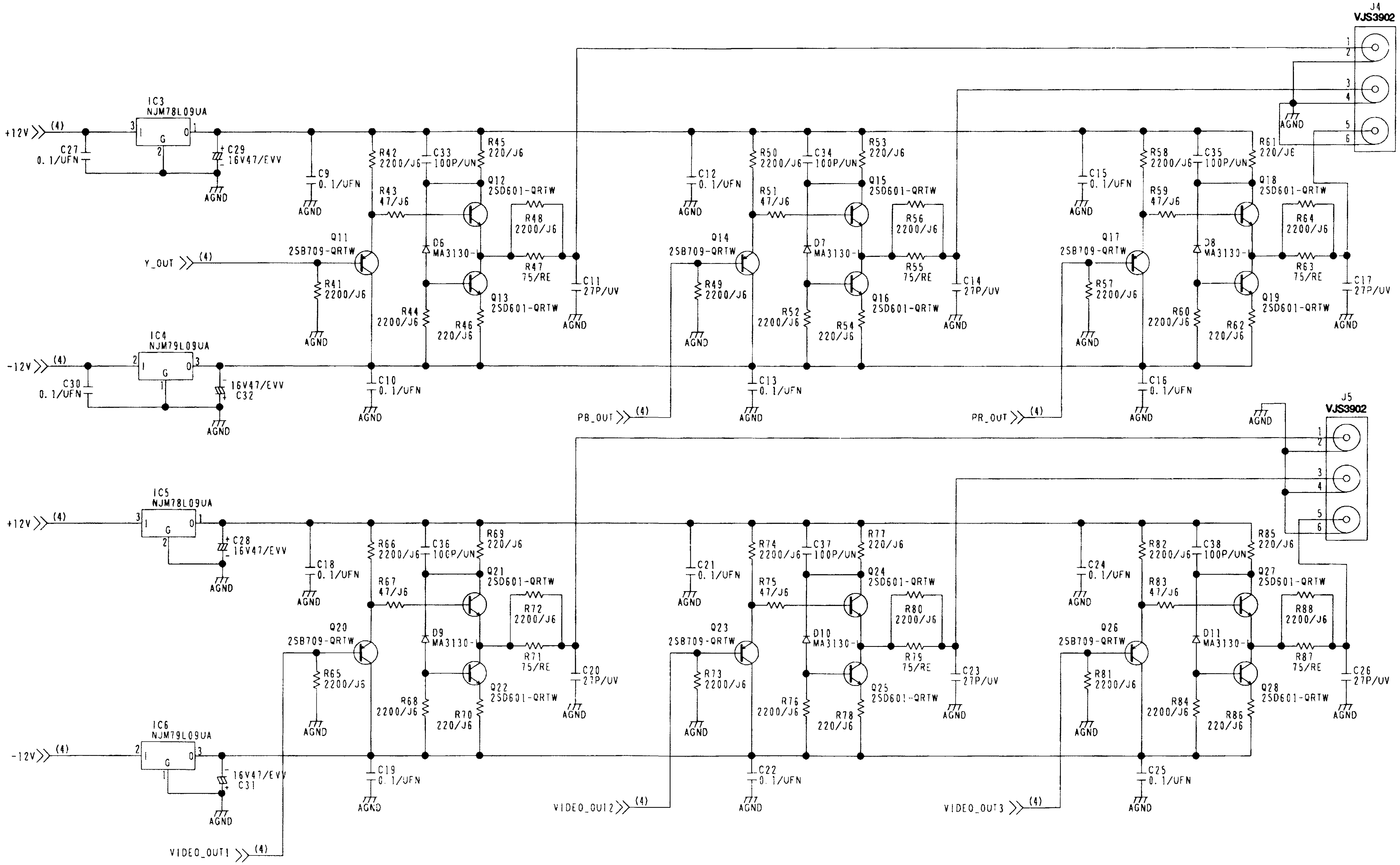
SCM134

VIDEO OVERALL BLOCK DIAGRAM

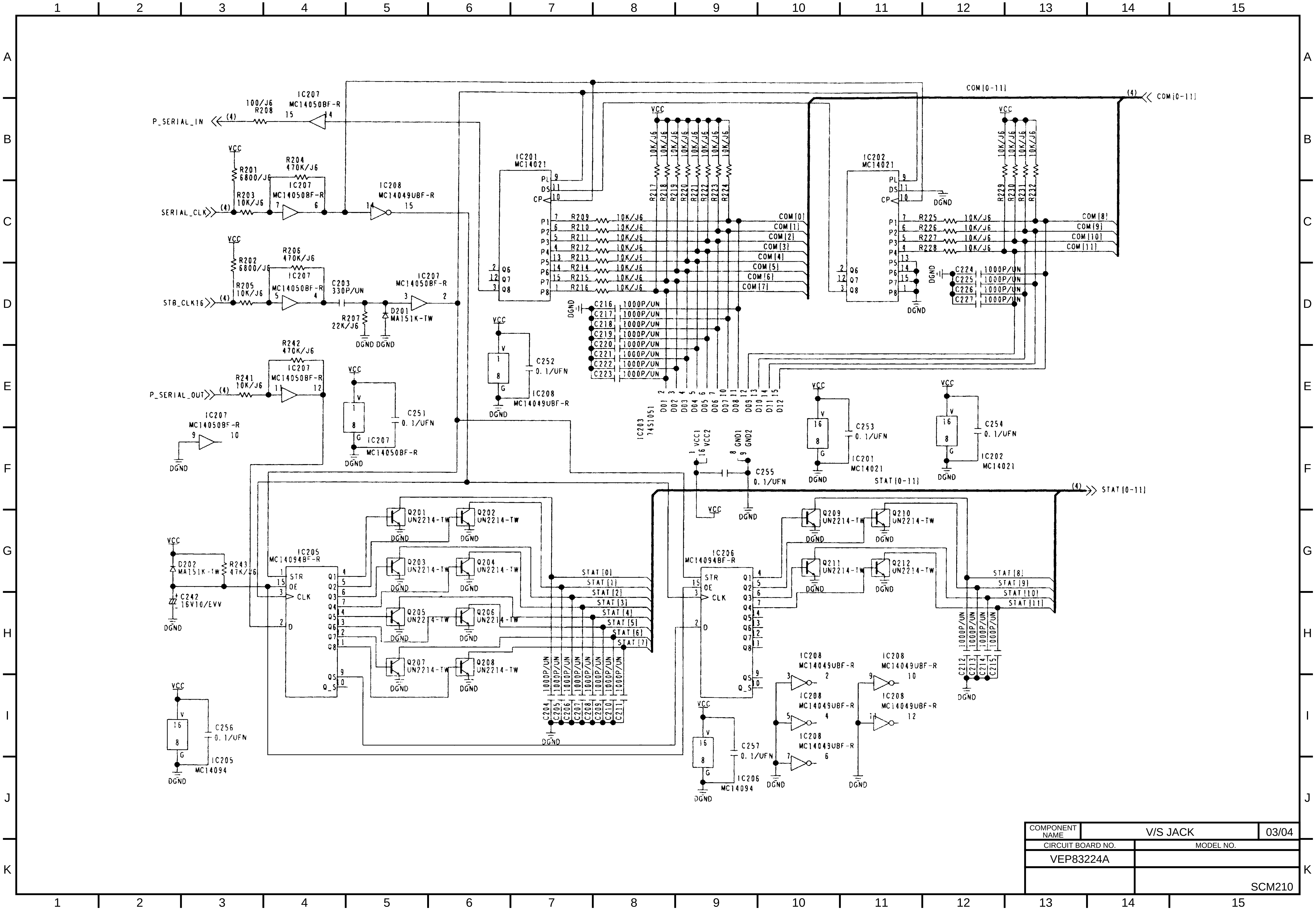

V/S JACK
V IN
REC PB
REC AUDIO
Y IN
PB IN
PR IN
VIDEO
IN
REF
IN
Y
PB
PR
CLAMP
A/D
CLAMP
A/D
CLAMP
A/D
TBC
MEM
MEM
EE
TBC
EE Y
EE C
CLAMP
A/D
Y/C
SEP.
C
DEM
10 → 8BIT
ROUNDING
DEC
Y
C
Y
C
REC
SHUF.
REC
SHUF.
MEM
REC
COMP.
BUFF
REC
ECC
ECC
MEM
V BLK SUB(VEP83405)
VBLK
CONT
BUS
CONV.
(AUX I/F)
VITC CC
ENCODE
VITC CC
DECODE
(AUX I/F)
FROM
RF
REC HEAD
PB DATA
REC
DCI
PB
REC
REC
DATA
TEST EE
PB HEAD
PB DATA
VV
MEM
MEM
PB
DCI
PB HEAD
REC HEAD
&
DV TAPE
PLAYBACK
PB
ECC
ECC
MEM
EE
PB
PB AUDIO
SIF
V OUT
S IN
EQ
PLL
S → P
DEC
AUDIO
LOOP
THROUGH
S OUT
P → S
ENC
AUDIO
SYNC
GEN
VIDEO1
VIDEO2
VIDEO3
Y
PB
PR
+
MOD
D/A
REC
601
DEC
EAV
SAV
V
PROC
INTER
POLATION
MEM
MEM
FILTER
Y
C
PB
SHUF.
PB
SHUF.
MEM
PB
COMP


J1
VJS3902
1
2
3
4
5
6
AGND
(4) Y_IN
(4) PB_IN
(4) PR_IN
R1 75/RE
R2 47/J6
R3 330K/J6
R4 3300/J6
R5 47/J6
R6 47/J6
R7 1000/J6
R8 33/J6
Q1 2SA1022-BCTW
Q2 2SC2295-BCTW
D1 MA151K-TW
R9 75/RE
R10 47/J6
R11 330K/J6
R12 3300/J6
R13 47/J6
R14 47/J6
R15 1000/J6
R16 33/J6
Q3 2SA1022-BCTW
Q4 2SC2295-BCTW
D2 MA151K-TW
R17 75/RE
R18 47/J6
R19 330K/J6
R20 3300/J6
R21 47/J6
R22 47/J6
R23 1000/J6
R24 33/J6
Q5 2SA1022-BCTW
Q6 2SC2295-BCTW
D3 MA151K-TW
+12V (4)
IC1 NJM78L09UA
C1 0.1/UFN
C4 16V47/EVV
C2 0.1/UFN
(4) VIDEO_IN
(4) REF_IN
J2 VJS3902
R25 75/RE
R26 47/J6
R27 330K/J6
R28 3300/J6
R29 47/J6
R30 47/J6
R31 1000/J6
R32 33/J6
Q7 2SA1022-BCTW
Q8 2SC2295-BCTW
D4 MA151K-TW
SW1 VSS0307
J3 VJS3901
R33 75/RE
R34 47/J6
R35 330K/J6
R36 3300/J6
R37 47/J6
R38 47/J6
R39 1000/J6
R40 33/J6
Q9 2SA1022-BCTW
Q10 2SC2295-BCTW
D5 MA151K-TW
SW2 VSS0307
-12V (4)
IC2 NJM79L09UA
C5 0.1/UFN
C8 16V47/EVV
C6 0.1/UFN
FRAME_GND
C50 0.1/UFN
C51 0.1/UFN

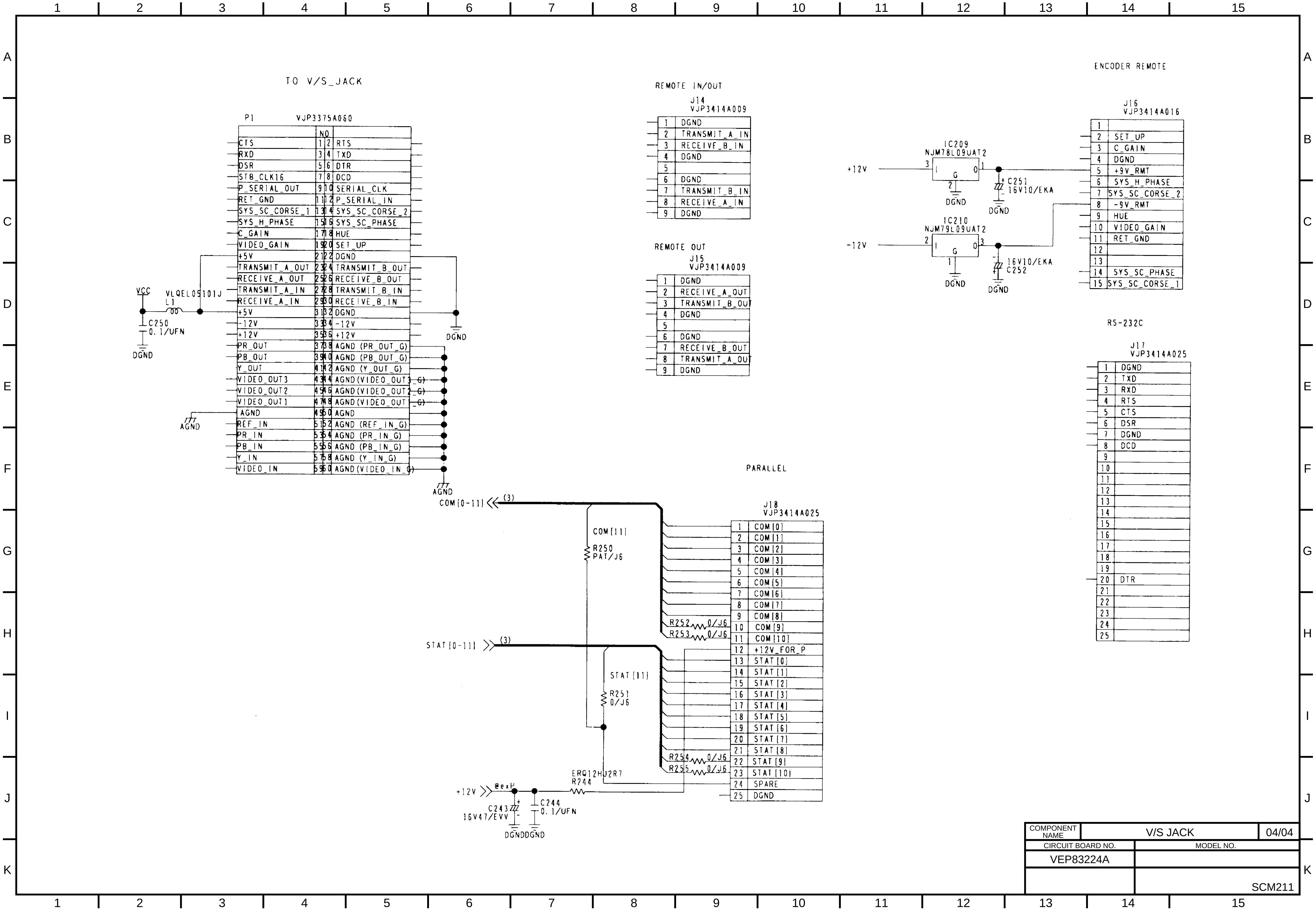
COMPONENT NAME	V/S JACK	01/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP83224A		
	SCM208	


J4
VJS3902
J5
VJS3902
IC3
NJM78L09UA
IC4
NJM79L09UA
IC5
NJM78L09UA
IC6
NJM79L09UA
+12V (4)
-12V (4)
Y_OUT (4)
PB_OUT (4)
PR_OUT (4)
VIDEO_OUT1 (4)
VIDEO_OUT2 (4)
VIDEO_OUT3 (4)
AGND
C27 0.1/UFN
C29 16V47/EVV
C30 0.1/UFN
C32 16V47/EVV
C28 16V47/EVV
C31 16V47/EVV
C9 0.1/UFN
C10 0.1/UFN
C11 27P/UV
C33 100P/UN
R41 2200/J6
R42 2200/J6
R43 47/J6
R44 2200/J6
R45 220/J6
R46 220/J6
R47 75/RE
R48 2200/J6
Q11 2SB709-QRTW
Q12 2SD601-QRTW
Q13 2SD601-QRTW
D6 MA3130
C12 0.1/UFN
C13 0.1/UFN
C14 27P/UV
C34 100P/UN
R49 2200/J6
R50 2200/J6
R51 47/J6
R52 2200/J6
R53 220/J6
R54 220/J6
R55 75/RE
R56 2200/J6
Q14 2SB709-QRTW
Q15 2SD601-QRTW
Q16 2SD601-QRTW
D7 MA3130
C15 0.1/UFN
C16 0.1/UFN
C17 27P/UV
C35 100P/UN
R57 2200/J6
R58 2200/J6
R59 47/J6
R60 2200/J6
R61 220/J6
R62 220/J6
R63 75/RE
R64 2200/J6
Q17 2SB709-QRTW
Q18 2SD601-QRTW
Q19 2SD601-QRTW
D8 MA3130
C18 0.1/UFN
C19 0.1/UFN
C20 27P/UV
C36 100P/UN
R65 2200/J6
R66 2200/J6
R67 47/J6
R68 2200/J6
R69 220/J6
R70 220/J6
R71 75/RE
R72 2200/J6
Q20 2SB709-QRTW
Q21 2SD601-QRTW
Q22 2SD601-QRTW
D9 MA3130
C21 0.1/UFN
C22 0.1/UFN
C23 27P/UV
C37 100P/UN
R73 2200/J6
R74 2200/J6
R75 47/J6
R76 2200/J6
R77 220/J6
R78 220/J6
R79 75/RE
R80 2200/J6
Q23 2SB709-QRTW
Q24 2SD601-QRTW
Q25 2SD601-QRTW
D10 MA3130
C24 0.1/UFN
C25 0.1/UFN
C26 27P/UV
C38 100P/UN
R81 2200/J6
R82 2200/J6
R83 47/J6
R84 2200/J6
R85 220/J6
R86 220/J6
R87 75/RE
R88 2200/J6
Q26 2SB709-QRTW
Q27 2SD601-QRTW
Q28 2SD601-QRTW
D11 MA3130
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	V/S JACK	02/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP83224A		
	SCM209	

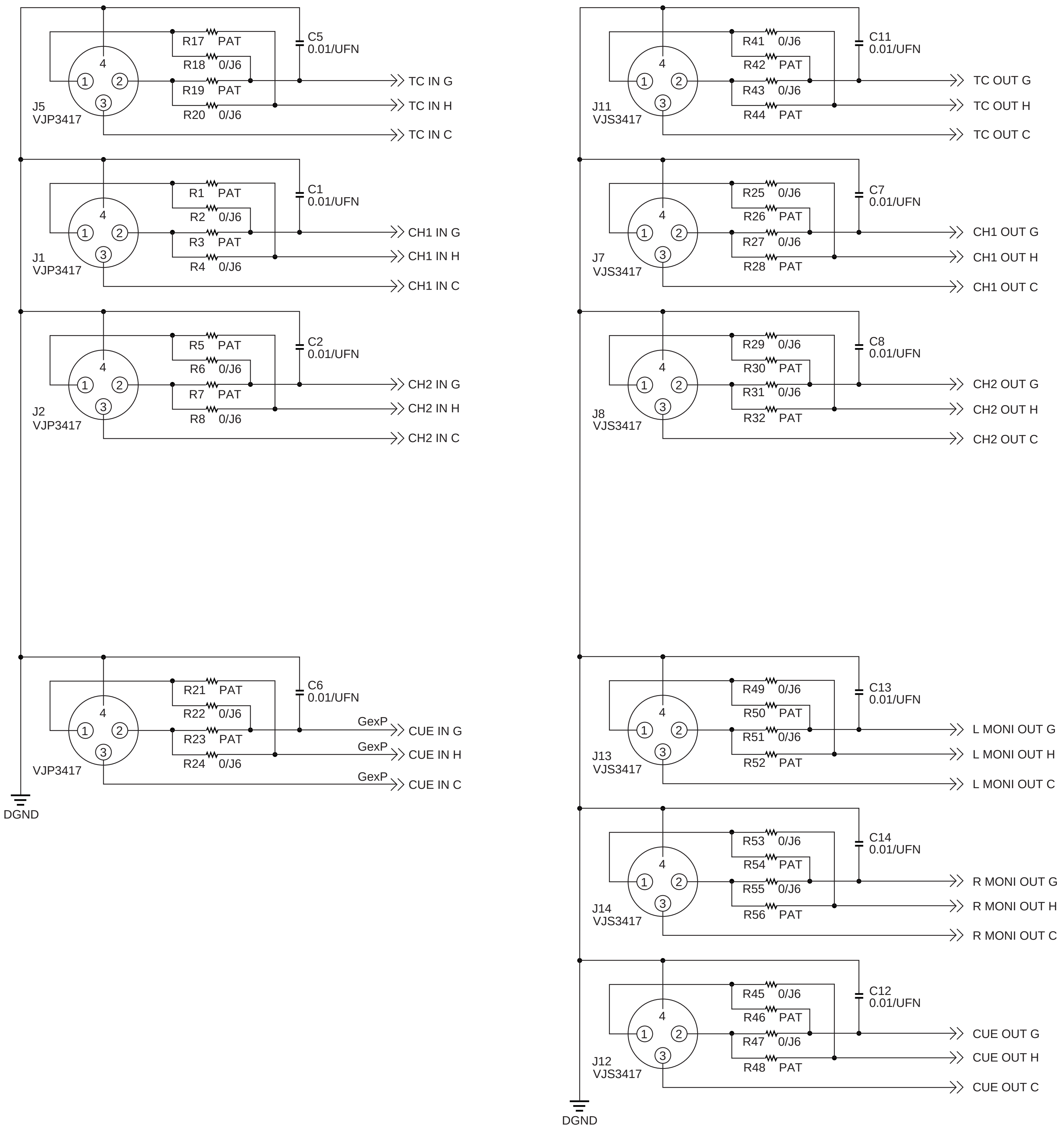

P_SERIAL_IN
SERIAL_CLK
STB_CLK16
P_SERIAL_OUT
R208 100/J6
R201 6800/J6
R203 10K/J6
R204 470K/J6
R202 6800/J6
R205 10K/J6
R206 470K/J6
R207 22K/J6
R241 10K/J6
R242 470K/J6
R243 47K/J6
C203 330P/UN
D201 MA151K-TW
D202 MA151K-TW
C242 16V10/EVV
IC207 MC14050BF-R
IC208 MC14049UBF-R
IC201 MC14021
IC202 MC14021
IC203 74S1051
IC205 MC14094BF-R
IC206 MC14094BF-R
R209–R216 10K/J6
R217–R224 10K/J6
R225–R228 10K/J6
R229–R232 10K/J6
C216–C223 1000P/UN
C224–C227 1000P/UN
C204–C211 1000P/UN
C212–C215 1000P/UN
C251 0.1/UFN
C252 0.1/UFN
C253 0.1/UFN
C254 0.1/UFN
C255 0.1/UFN
C256 0.1/UFN
C257 0.1/UFN
Q201–Q212 UN2214-TW
COM[0-11]
STAT[0-11]
VCC
DGND
IC205 MC14094
IC206 MC14094

COMPONENT NAME	V/S JACK	03/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP83224A		
	SCM210	


TO V/S_JACK
P1 VJP3375A060
NO
1 CTS | 2 RTS
3 RXD | 4 TXD
5 DSR | 6 DTR
7 STB_CLK16 | 8 DCD
9 P_SERIAL_OUT | 10 SERIAL_CLK
11 RET_GND | 12 P_SERIAL_IN
13 SYS_SC_CORSE_1 | 14 SYS_SC_CORSE_2
15 SYS_H_PHASE | 16 SYS_SC_PHASE
17 C_GAIN | 18 HUE
19 VIDEO_GAIN | 20 SET_UP
21 +5V | 22 DGND
23 TRANSMIT_A_OUT | 24 TRANSMIT_B_OUT
25 RECEIVE_A_OUT | 26 RECEIVE_B_OUT
27 TRANSMIT_A_IN | 28 TRANSMIT_B_IN
29 RECEIVE_A_IN | 30 RECEIVE_B_IN
31 +5V | 32 DGND
33 -12V | 34 -12V
35 +12V | 36 +12V
37 PR_OUT | 38 AGND (PR_OUT_G)
39 PB_OUT | 40 AGND (PB_OUT_G)
41 Y_OUT | 42 AGND (Y_OUT_G)
43 VIDEO_OUT3 | 44 AGND (VIDEO_OUT3_G)
45 VIDEO_OUT2 | 46 AGND (VIDEO_OUT2_G)
47 VIDEO_OUT1 | 48 AGND (VIDEO_OUT1_G)
49 AGND | 50 AGND
51 REF_IN | 52 AGND (REF_IN_G)
53 PR_IN | 54 AGND (PR_IN_G)
55 PB_IN | 56 AGND (PB_IN_G)
57 Y_IN | 58 AGND (Y_IN_G)
59 VIDEO_IN | 60 AGND (VIDEO_IN_G)
VCC
VLQEL05101J
L1
C250
0.1/UFN
DGND
DGND
AGND
AGND
REMOTE IN/OUT
J14
VJP3414A009
1 DGND
2 TRANSMIT_A_IN
3 RECEIVE_B_IN
4 DGND
5
6 DGND
7 TRANSMIT_B_IN
8 RECEIVE_A_IN
9 DGND
REMOTE OUT
J15
VJP3414A009
1 DGND
2 RECEIVE_A_OUT
3 TRANSMIT_B_OUT
4 DGND
5
6 DGND
7 RECEIVE_B_OUT
8 TRANSMIT_A_OUT
9 DGND
IC209
NJM78L09UAT2
+12V
3 I G O 1
2
DGND
C251
16V10/EKA
DGND
IC210
NJM79L09UAT2
-12V
2 I G O 3
1
DGND
16V10/EKA
C252
DGND
ENCODER REMOTE
J16
VJP3414A016
1
2 SET_UP
3 C_GAIN
4 DGND
5 +9V_RMT
6 SYS_H_PHASE
7 SYS_SC_CORSE_2
8 -9V_RMT
9 HUE
10 VIDEO_GAIN
11 RET_GND
12
13
14 SYS_SC_PHASE
15 SYS_SC_CORSE_1
RS-232C
J17
VJP3414A025
1 DGND
2 TXD
3 RXD
4 RTS
5 CTS
6 DSR
7 DGND
8 DCD
9
10
11
12
13
14
15
16
17
18
19
20 DTR
21
22
23
24
25
PARALLEL
COM[0-11]
(3)
COM[11]
R250
PAT/J6
STAT[0-11]
(3)
STAT[11]
R251
0/J6
J18
VJP3414A025
1 COM[0]
2 COM[1]
3 COM[2]
4 COM[3]
5 COM[4]
6 COM[5]
7 COM[6]
8 COM[7]
9 COM[8]
10 COM[9]
11 COM[10]
12 +12V_FOR_P
13 STAT[0]
14 STAT[1]
15 STAT[2]
16 STAT[3]
17 STAT[4]
18 STAT[5]
19 STAT[6]
20 STAT[7]
21 STAT[8]
22 STAT[9]
23 STAT[10]
24 SPARE
25 DGND
R252 0/J6
R253 0/J6
R254 0/J6
R255 0/J6
ERG12HJ2R7
R244
+12V
@exP
C243
16V47/EVV
C244
0.1/UFN
DGNDDGND
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	V/S JACK	04/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP83224A		

SCM211


J5
VJP3417
R17 PAT
R18 0/J6
R19 PAT
R20 0/J6
C5
0.01/UFN
TC IN G
TC IN H
TC IN C
J1
VJP3417
R1 PAT
R2 0/J6
R3 PAT
R4 0/J6
C1
0.01/UFN
CH1 IN G
CH1 IN H
CH1 IN C
J2
VJP3417
R5 PAT
R6 0/J6
R7 PAT
R8 0/J6
C2
0.01/UFN
CH2 IN G
CH2 IN H
CH2 IN C
VJP3417
R21 PAT
R22 0/J6
R23 PAT
R24 0/J6
C6
0.01/UFN
GexP
CUE IN G
GexP
CUE IN H
GexP
CUE IN C
DGND
J11
VJS3417
R41 0/J6
R42 PAT
R43 0/J6
R44 PAT
C11
0.01/UFN
TC OUT G
TC OUT H
TC OUT C
J7
VJS3417
R25 0/J6
R26 PAT
R27 0/J6
R28 PAT
C7
0.01/UFN
CH1 OUT G
CH1 OUT H
CH1 OUT C
J8
VJS3417
R29 0/J6
R30 PAT
R31 0/J6
R32 PAT
C8
0.01/UFN
CH2 OUT G
CH2 OUT H
CH2 OUT C
J13
VJS3417
R49 0/J6
R50 PAT
R51 0/J6
R52 PAT
C13
0.01/UFN
L MONI OUT G
L MONI OUT H
L MONI OUT C
J14
VJS3417
R53 0/J6
R54 PAT
R55 0/J6
R56 PAT
C14
0.01/UFN
R MONI OUT G
R MONI OUT H
R MONI OUT C
J12
VJS3417
R45 0/J6
R46 PAT
R47 0/J6
R48 PAT
C12
0.01/UFN
CUE OUT G
CUE OUT H
CUE OUT C
DGND
4
1
2
3

P1 VJP3375A060

		NO.			
	+12V	1	2	+12V	
	–12V	3	4	–12V	
	TC OUT G	5	6	TC OUT G	
	TC OUT C	7	8	TC OUT H	
	TC IN G	9	10	TC IN G	
	TC IN C	11	12	TC IN H	
	R MONI OUT G	13	14	R MONI OUT G	
	R MONI OUT C	15	16	R MONI OUT H	
	L MONI OUT G	17	18	L MONI OUT G	
	L MONI OUT C	19	20	L MONI OUT H	
	CH2 OUT G	21	22	CH2 OUT G	
	CH2 OUT C	23	24	CH2 OUT H	
	CH1 OUT G	25	26	CH1 OUT G	
	CH1 OUT C	27	28	CH1 OUT H	
	CH2 IN G	29	30	CH2 IN G	
	CH2 IN C	31	32	CH2 IN H	
	CH1 IN G	33	34	CH1 IN G	
	CH1 IN C	35	36	CH1 IN H	
	4P C OUT G	37	38	4P C OUT G	
(2)	WIDE OUT L	39	40	4P C OUT	(2)
	4P Y OUT G	41	42	4P Y OUT G	
		43	44	4P Y OUT	(2)
	4P C IN G	45	46	4P C IN G	
(2)	WIDE IN L	47	48	4P C IN	(2)
	4P Y IN G	49	50	4P Y IN G	
		51	52	4P Y IN	(2)
	CEU OUT G	53	54	CEU OUT G	
	CUE OUT C	55	56	CUE OUT H	
	CUE IN G	57	58	CUE IN G	
	CUE IN C	59	60	CUE IN H	

P3
OPTION (VJP1243T)

1	L MONI OUT H
2	R MONI OUT H
3	L MONI OUT G

COMPONENT NAME	A JACK	01/02
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP84183B		
EX.JAPAN:VEP84183A	SCM219	

All this page is the option (Y/C INPUT/OUTPUT).

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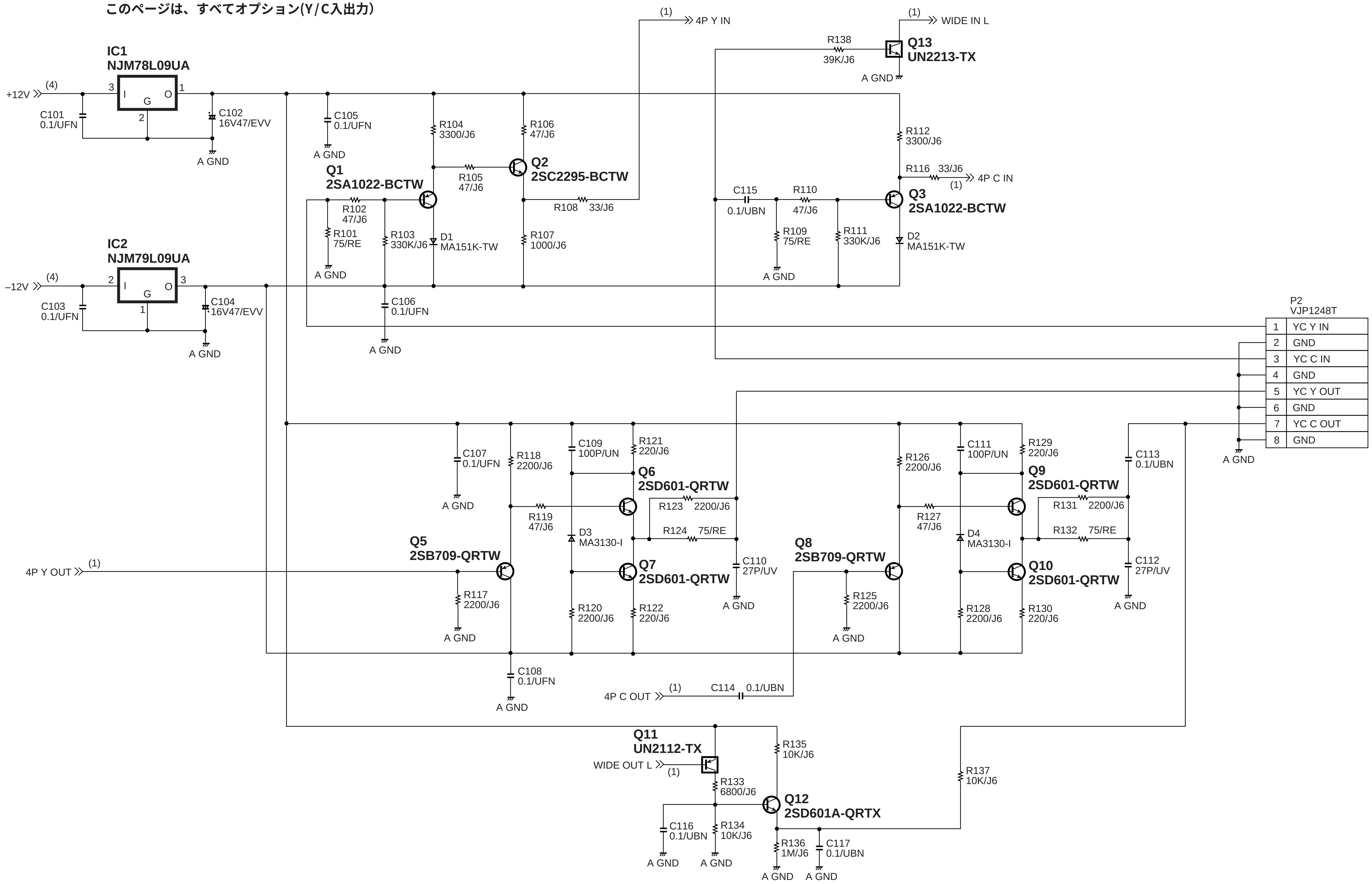
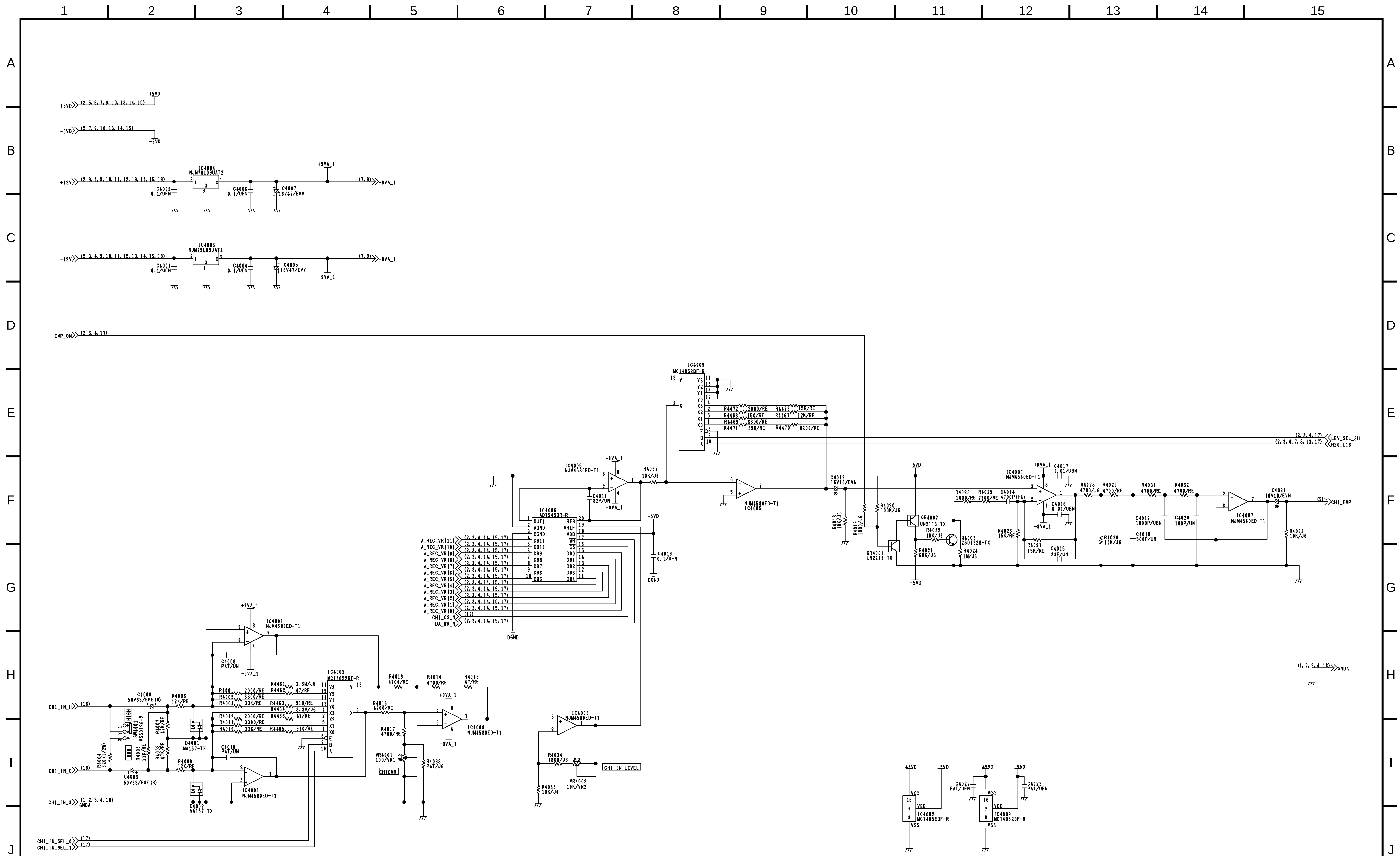
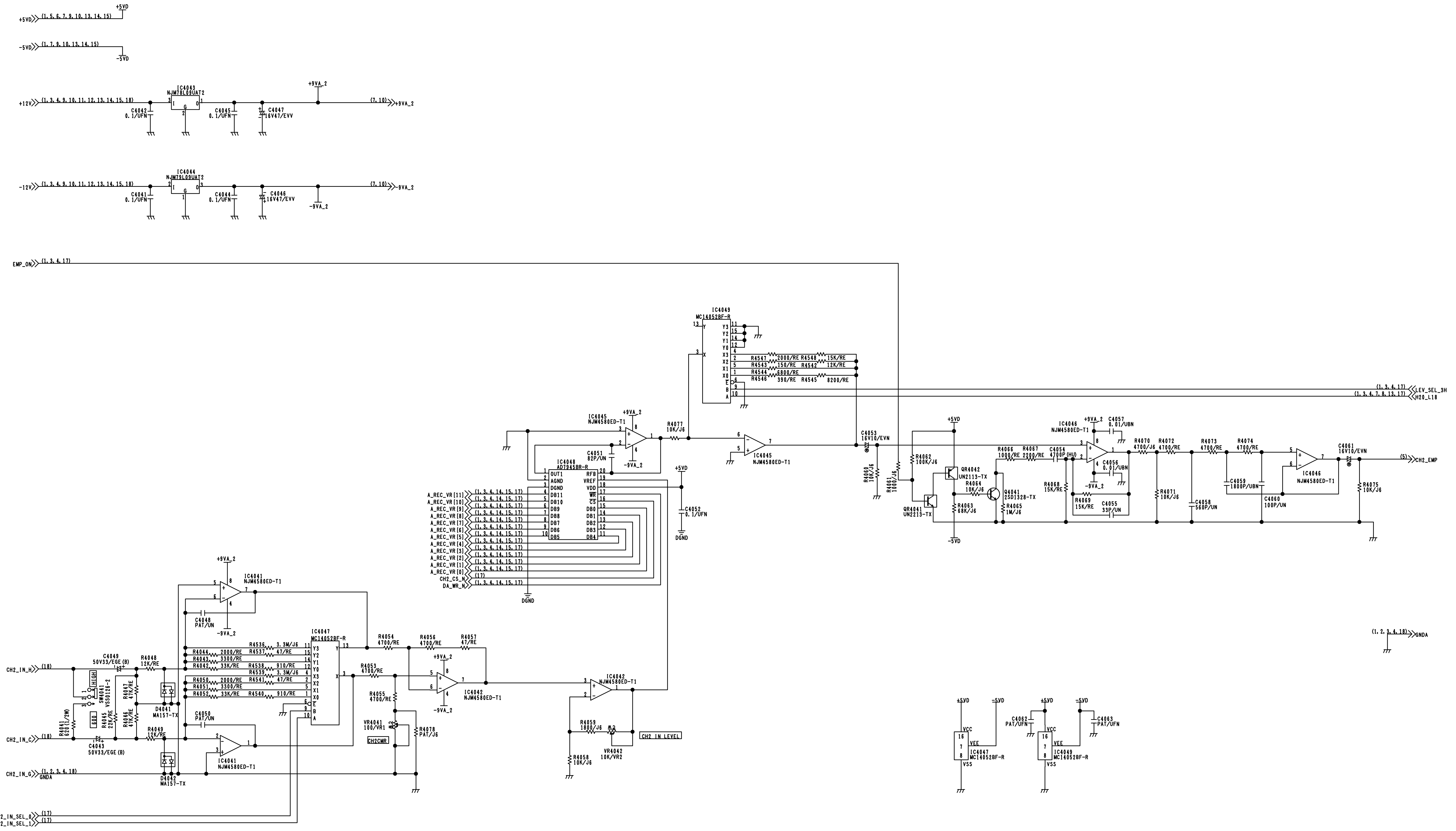

IC1
NJM78L09UA
+12V
(4)
3
I
G
O
1
2
C101
0.1/UFN
C102
16V47/EVV
A GND
IC2
NJM79L09UA
–12V
(4)
2
I
G
O
3
1
C103
0.1/UFN
C104
16V47/EVV
A GND
C105
0.1/UFN
A GND
Q1
2SA1022-BCTW
R102
47/J6
R101
75/RE
A GND
R103
330K/J6
C106
0.1/UFN
A GND
R104
3300/J6
R105
47/J6
D1
MA151K-TW
Q2
2SC2295-BCTW
R106
47/J6
R107
1000/J6
R108 33/J6
(1)
4P Y IN
(1)
WIDE IN L
R138
39K/J6
Q13
UN2213-TX
A GND
R112
3300/J6
R116 33/J6
(1)
4P C IN
C115
0.1/UBN
R110
47/J6
R109
75/RE
A GND
R111
330K/J6
Q3
2SA1022-BCTW
D2
MA151K-TW
P2
VJP1248T
1 YC Y IN
2 GND
3 YC C IN
4 GND
5 YC Y OUT
6 GND
7 YC C OUT
8 GND
A GND
C107
0.1/UFN
A GND
R118
2200/J6
R119
47/J6
Q5
2SB709-QRTW
4P Y OUT
(1)
R117
2200/J6
A GND
C108
0.1/UFN
A GND
C109
100P/UN
D3
MA3130-I
R120
2200/J6
R121
220/J6
Q6
2SD601-QRTW
R123 2200/J6
R124 75/RE
Q7
2SD601-QRTW
R122
220/J6
C110
27P/UV
A GND
4P C OUT
(1)
C114 0.1/UBN
Q8
2SB709-QRTW
R125
2200/J6
A GND
R126
2200/J6
R127
47/J6
C111
100P/UN
D4
MA3130-I
R128
2200/J6
R129
220/J6
Q9
2SD601-QRTW
R131 2200/J6
R132 75/RE
Q10
2SD601-QRTW
R130
220/J6
C113
0.1/UBN
C112
27P/UV
A GND
Q11
UN2112-TX
WIDE OUT L
(1)
R133
6800/J6
C116
0.1/UBN
A GND
R134
10K/J6
A GND
R135
10K/J6
Q12
2SD601A-QRTX
R136
1M/J6
A GND
C117
0.1/UBN
A GND
R137
10K/J6

COMPONENT NAME	A JACK	01/02
CIRCUIT BOARD NO.	MODEL NO.	
JAPAN:VEP84183B		
EX.JAPAN:VEP84183A	SCM220	


+5VD
(2, 5, 6, 7, 9, 10, 13, 14, 15)
-5VD
(2, 7, 9, 10, 13, 14, 15)
+12V
(2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18)
IC4004
NJM78L09UAT2
C4002
0.1/UFN
C4006
0.1/UFN
C4007
16V47/EVV
+9VA_1
(7, 9)
-12V
IC4003
NJM79L09UAT2
C4001
0.1/UFN
C4004
0.1/UFN
C4005
16V47/EVV
-9VA_1
EMP_ON
(2, 3, 4, 17)
IC4009
MC14052BF-R
R4472 2000/RE
R4473 15K/RE
R4468 150/RE
R4467 12K/RE
R4469 6800/RE
R4471 390/RE
R4470 8200/RE
LEV_SEL_3H
(2, 3, 4, 7, 8, 13, 17)
H20_L18
IC4005
NJM4580ED-T1
R4037
10K/J6
C4011
82P/UN
IC4006
AD7945BR-R
OUT1
AGND
DGND
DB11
DB10
DB9
DB8
DB7
DB6
DB5
RFB
VREF
VDD
WR
CS
DB0
DB1
DB2
DB3
DB4
A_REC_VR[11]
A_REC_VR[10]
A_REC_VR[9]
A_REC_VR[8]
A_REC_VR[7]
A_REC_VR[6]
A_REC_VR[5]
A_REC_VR[4]
A_REC_VR[3]
A_REC_VR[2]
A_REC_VR[1]
A_REC_VR[0]
CH1_CS_N
DA_WR_N
(2, 3, 4, 14, 15, 17)
(17)
DGND
C4013
0.1/UFN
C4012
16V10/EVN
R4018
10K/J6
R4019
1000/J6
R4020
100K/J6
QR4002
UN2113-TX
QR4001
UN2213-TX
R4022
10K/J6
R4021
68K/J6
Q4003
2SD1328-TX
R4024
1M/J6
R4023
1000/RE
R4025
2200/RE
C4014
4700P(HU)
R4026
15K/RE
R4027
15K/RE
C4015
33P/UN
IC4007
NJM4580ED-T1
C4017
0.01/UBN
C4016
0.01/UBN
R4028
4700/J6
R4029
4700/RE
R4030
10K/J6
C4019
1800P/UBN
C4018
560P/UN
R4031
4700/RE
R4032
4700/RE
C4020
100P/UN
C4021
16V10/EVN
R4033
10K/J6
(5)
CH1_EMP
IC4001
NJM4580ED-T1
C4008
PAT/UN
IC4002
MC14052BF-R
R4461 3.3M/J6
R4001 2000/RE
R4462 47/RE
R4002 3300/RE
R4003 33K/RE
R4463 910/RE
R4464 3.3M/J6
R4012 2000/RE
R4466 47/RE
R4011 3300/RE
R4010 33K/RE
R4465 910/RE
CH1_IN_H
(18)
C4009
50V33/EGE(B)
R4006
12K/RE
HIGH
SW4001
VSS0126-2
600
R4004
620(1/2W)
R4005
22K/RE
R4007
47K/RE
R4008
47K/RE
D4001
MA157-TX
C4010
PAT/UN
CH1_IN_C
C4003
50V33/EGE(B)
R4009
12K/RE
CH1_IN_G
(1, 2, 3, 4, 18)
GNDA
D4002
MA157-TX
CH1_IN_SEL_0
CH1_IN_SEL_1
R4013
4700/RE
R4014
4700/RE
R4015
47/RE
R4016
4700/RE
IC4008
NJM4580ED-T1
R4017
4700/RE
VR4001
100/VR1
R4038
PAT/J6
CH1CMR
R4034
1800/J6
VR4002
10K/VR2
R4035
10K/J6
CH1 IN LEVEL
+5VD
-5VD
VCC
VEE
VSS
C4022
PAT/UFN
C4023
PAT/UFN

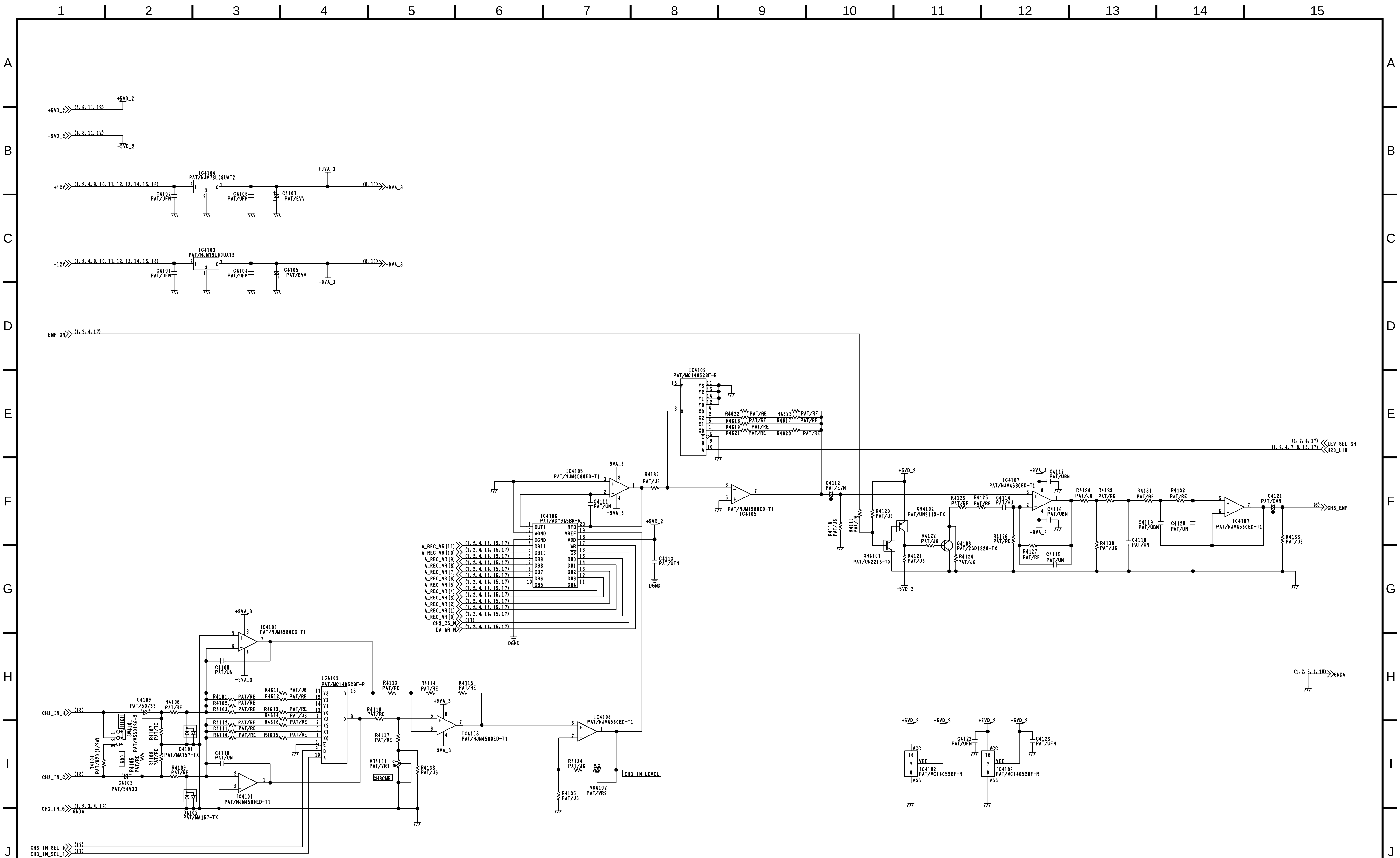
Ref No4000 Series (4000-4040)
R (4461-4475)

COMPONENT NAME	A ADDA (CH 1 INPUT)		01/18
CIRCUIT BOARD NO.		MODEL NO.	
VEP84301B			
		SCM156	


+5VD
-5VD
+12V
-12V
IC4043
NJM78L09UAT2
IC4044
NJM79L09UAT2
C4042 0.1/UFN
C4045 0.1/UFN
C4047 16V47/EVV
C4041 0.1/UFN
C4044 0.1/UFN
C4046 16V47/EVV
+9VA_2
-9VA_2
EMP_ON
IC4049
MC14052BF-R
R4547 2000/RE
R4548 15K/RE
R4543 150/RE
R4542 12K/RE
R4544 6800/RE
R4546 390/RE
R4545 8200/RE
LEV_SEL_3H
H20_L18
IC4045
NJM4580ED-T1
R4077 10K/J6
C4051 82P/UN
IC4048
AD7945BR-R
OUT1
AGND
DGND
RFB
VREF
VDD
WR
CS
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
DB8
DB9
DB10
DB11
A_REC_VR[11]
A_REC_VR[10]
A_REC_VR[9]
A_REC_VR[8]
A_REC_VR[7]
A_REC_VR[6]
A_REC_VR[5]
A_REC_VR[4]
A_REC_VR[3]
A_REC_VR[2]
A_REC_VR[1]
A_REC_VR[0]
CH2_CS_N
DA_WR_N
C4052 0.1/UFN
DGND
C4053 16V10/EVN
R4060 10K/J6
R4061 1000/J6
R4062 100K/J6
QR4042 UN2113-TX
QR4041 UN2213-TX
R4063 68K/J6
R4064 10K/J6
Q4041 2SD1328-TX
R4065 1M/J6
R4066 1000/RE
R4067 2200/RE
C4054 4700P(HU)
R4068 15K/RE
R4069 15K/RE
C4055 33P/UN
IC4046
NJM4580ED-T1
C4057 0.01/UBN
C4056 0.01/UBN
R4070 4700/J6
R4071 10K/J6
R4072 4700/RE
C4058 560P/UN
R4073 4700/RE
R4074 4700/RE
C4059 1800P/UBN
C4060 100P/UN
C4061 16V10/EVN
R4075 10K/J6
CH2_EMP
GNDA
IC4041
NJM4580ED-T1
C4048 PAT/UN
IC4047
MC14052BF-R
R4536 3.3M/J6
R4537 47/RE
R4044 2000/RE
R4043 3300/RE
R4042 33K/RE
R4538 910/RE
R4539 3.3M/J6
R4050 2000/RE
R4541 47/RE
R4051 3300/RE
R4052 33K/RE
R4540 910/RE
R4054 4700/RE
R4056 4700/RE
R4057 47/RE
R4053 4700/RE
R4055 4700/RE
VR4041 100/VR1
CH2CMR
R4078 PAT/J6
IC4042
NJM4580ED-T1
R4059 1800/J6
VR4042 10K/VR2
R4058 10K/J6
CH2 IN LEVEL
CH2_IN_H
CH2_IN_C
CH2_IN_G
C4049 50V33/EGE(B)
R4048 12K/RE
SW4041 VSS0126-2
HIGH
LOW
R4041 6200/2W
R4045 22K/RE
R4047 47K/RE
R4046 47K/RE
D4041 MA157-TX
D4042 MA157-TX
C4043 50V33/EGE(B)
R4049 12K/RE
C4050 PAT/UN
CH2_IN_SEL_0
CH2_IN_SEL_1
C4062 PAT/UFN
C4063 PAT/UFN
IC4047 MC14052BF-R
IC4049 MC14052BF-R
VCC
VEE
VSS

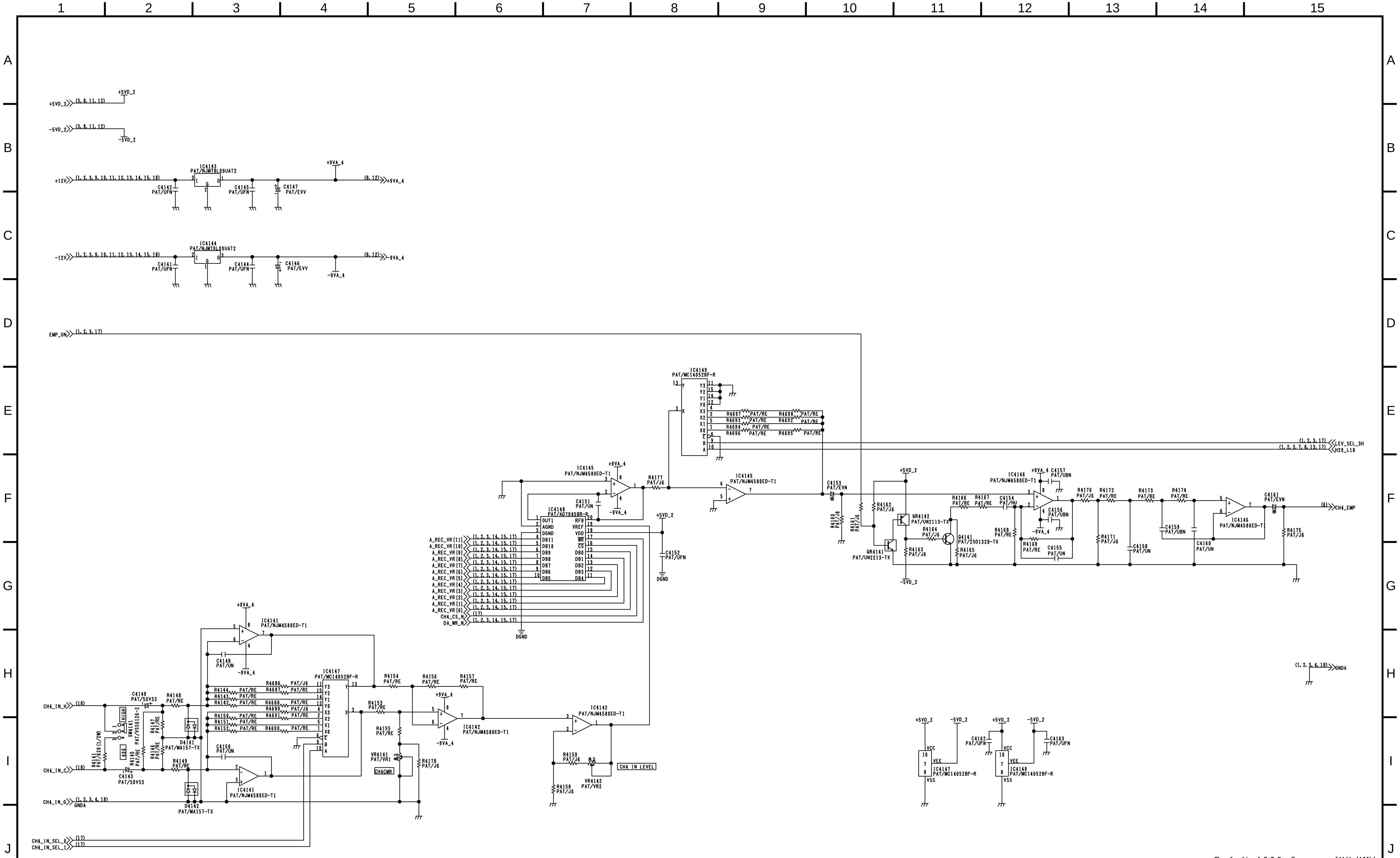
Ref No4000 Series (4041-4080))
R(4536-4550)

COMPONENT NAME	A ADDA (CH 2 INPUT)	02/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM157	


+5VD_2 (4, 8, 11, 12) +5VD_2
-5VD_2 (4, 8, 11, 12) -5VD_2
+12V (1, 2, 4, 9, 10, 11, 12, 13, 14, 15, 18)
IC4104 PAT/NJM78L09UAT2
C4102 PAT/UFN
C4106 PAT/UFN
C4107 PAT/EVV
+9VA_3 (8, 11) +9VA_3
-12V (1, 2, 4, 9, 10, 11, 12, 13, 14, 15, 18)
IC4103 PAT/NJM79L09UAT2
C4101 PAT/UFN
C4104 PAT/UFN
C4105 PAT/EVV
-9VA_3 (8, 11) -9VA_3
EMP_ON (1, 2, 4, 17)
IC4109 PAT/MC14052BF-R
R4622 PAT/RE
R4623 PAT/RE
R4618 PAT/RE
R4617 PAT/RE
R4619 PAT/RE
R4621 PAT/RE
R4620 PAT/RE
(1, 2, 4, 17) LEV_SEL_3H
(1, 2, 4, 7, 8, 13, 17) H20_L18
IC4105 PAT/NJM4580ED-T1
R4137 PAT/J6
C4111 PAT/UN
IC4106 PAT/AD7945BR-R
OUT1 AGND DGND DB11 DB10 DB9 DB8 DB7 DB6 DB5
RFB VREF VDD WR CS DB0 DB1 DB2 DB3 DB4
+5VD_2
C4113 PAT/UFN
DGND
A_REC_VR [11] (1, 2, 4, 14, 15, 17)
A_REC_VR [10] (1, 2, 4, 14, 15, 17)
A_REC_VR [9] (1, 2, 4, 14, 15, 17)
A_REC_VR [8] (1, 2, 4, 14, 15, 17)
A_REC_VR [7] (1, 2, 4, 14, 15, 17)
A_REC_VR [6] (1, 2, 4, 14, 15, 17)
A_REC_VR [5] (1, 2, 4, 14, 15, 17)
A_REC_VR [4] (1, 2, 4, 14, 15, 17)
A_REC_VR [3] (1, 2, 4, 14, 15, 17)
A_REC_VR [2] (1, 2, 4, 14, 15, 17)
A_REC_VR [1] (1, 2, 4, 14, 15, 17)
A_REC_VR [0] (1, 2, 4, 14, 15, 17)
CH3_CS_N (17)
DA_WR_N (1, 2, 4, 14, 15, 17)
C4112 PAT/EVN
R4118 PAT/J6
R4119 PAT/J6
+5VD_2
R4120 PAT/J6
QR4102 PAT/UN2113-TX
QR4101 PAT/UN2213-TX
R4121 PAT/J6
-5VD_2
R4122 PAT/J6
Q4103 PAT/2SD1328-TX
R4124 PAT/J6
R4123 PAT/RE
R4125 PAT/RE
C4114 PAT/HU
R4126 PAT/RE
R4127 PAT/RE
C4115 PAT/UN
IC4107 PAT/NJM4580ED-T1
C4117 PAT/UBN
C4116 PAT/UBN
R4128 PAT/J6
R4129 PAT/RE
R4130 PAT/J6
C4118 PAT/UN
R4131 PAT/RE
R4132 PAT/RE
C4119 PAT/UBN
C4120 PAT/UN
C4121 PAT/EVN
R4133 PAT/J6
(6) CH3_EMP
(1, 2, 3, 4, 18) GNDA
IC4101 PAT/NJM4580ED-T1
C4108 PAT/UN
CH3_IN_H (18)
C4109 PAT/50V33
R4106 PAT/RE
HIGH
600
SW4101 PAT/VSS0126-2
R4104 PAT/620 (1/2W)
R4105 PAT/RE
R4107 PAT/RE
R4108 PAT/RE
D4101 PAT/MA157-TX
CH3_IN_C (18)
C4103 PAT/50V33
R4109 PAT/RE
C4110 PAT/UN
CH3_IN_G (1, 2, 3, 4, 18) GNDA
D4102 PAT/MA157-TX
IC4102 PAT/MC14052BF-R
R4101 PAT/RE
R4102 PAT/RE
R4103 PAT/RE
R4112 PAT/RE
R4111 PAT/RE
R4110 PAT/RE
R4611 PAT/J6
R4612 PAT/RE
R4613 PAT/RE
R4614 PAT/J6
R4616 PAT/RE
R4615 PAT/RE
CH3_IN_SEL_0 (17)
CH3_IN_SEL_1 (17)
R4113 PAT/RE
R4114 PAT/RE
R4115 PAT/RE
R4116 PAT/RE
R4117 PAT/RE
VR4101 PAT/VR1
CH3CMR
R4138 PAT/J6
IC4108 PAT/NJM4580ED-T1
R4134 PAT/J6
VR4102 PAT/VR2
R4135 PAT/J6
CH3 IN LEVEL
IC4102 PAT/MC14052BF-R
IC4109 PAT/MC14052BF-R
C4122 PAT/UFN
C4123 PAT/UFN
VCC VEE VSS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

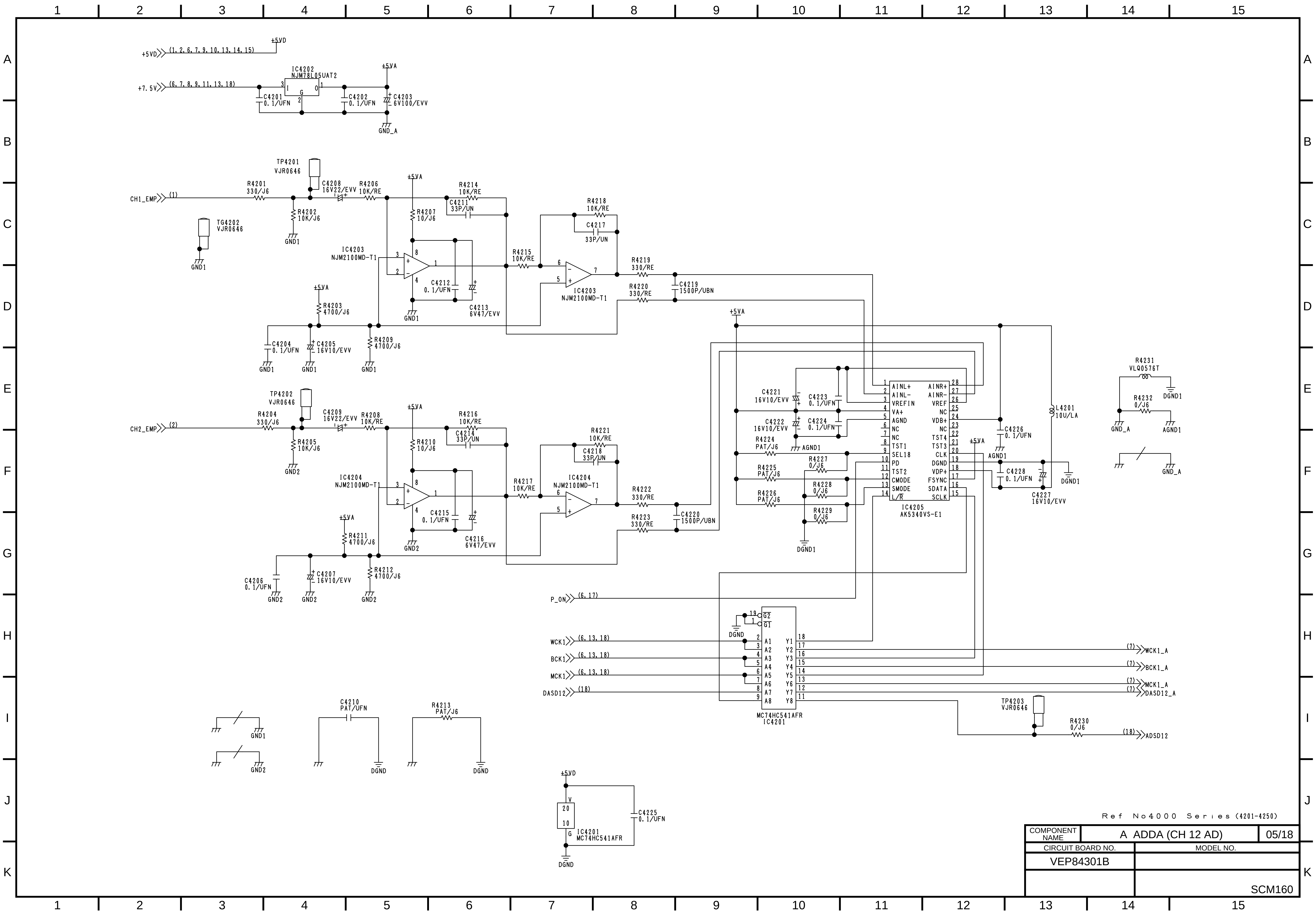
Ref No4000 Series (4100-4140)
R (4611-4475)

COMPONENT NAME	A ADDA (CH 3 INPUT)	03/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM158	


+5VD_2
-5VD_2
+12V
IC4143 PAT/NJM78L09UAT2
C4142 PAT/UFN
C4145 PAT/UFN
C4147 PAT/EVV
+9VA_4
-12V
IC4144 PAT/NJM79L09UAT2
C4141 PAT/UFN
C4144 PAT/UFN
C4146 PAT/EVV
-9VA_4
EMP_ON
IC4149 PAT/MC14052BF-R
LEV_SEL_3H
H20_L18
IC4145 PAT/NJM4580ED-T1
R4177 PAT/J6
IC4148 PAT/AD7945BR-R
C4151 PAT/UN
C4152 PAT/UFN
DGND
A_REC_VR[11]
A_REC_VR[10]
A_REC_VR[9]
A_REC_VR[8]
A_REC_VR[7]
A_REC_VR[6]
A_REC_VR[5]
A_REC_VR[4]
A_REC_VR[3]
A_REC_VR[2]
A_REC_VR[1]
A_REC_VR[0]
CH4_CS_N
DA_WR_N
C4153 PAT/EVN
R4160
R4161 PAT/J6
R4162 PAT/J6
QR4142 PAT/UN2113-TX
QR4141 PAT/UN2213-TX
R4163 PAT/J6
R4164 PAT/J6
Q4141 PAT/2SD1328-TX
R4165 PAT/J6
R4166 PAT/RE
R4167 PAT/RE
C4154 PAT/HU
R4168 PAT/RE
R4169 PAT/RE
C4155 PAT/UN
IC4146 PAT/NJM4580ED-T1
C4157 PAT/UBN
C4156 PAT/UBN
R4170 PAT/J6
R4171 PAT/J6
R4172 PAT/RE
C4158 PAT/UN
R4173 PAT/RE
R4174 PAT/RE
C4159 PAT/UBN
C4160 PAT/UN
C4161 PAT/EVN
R4175 PAT/J6
CH4_EMP
GNDA
CH4_IN_H
CH4_IN_C
CH4_IN_G
C4149 PAT/50V33
C4143 PAT/50V33
SW4141 PAT/VSS0126-2
HIGH
R4148 PAT/RE
R4149 PAT/RE
D4141 PAT/MA157-TX
D4142 PAT/MA157-TX
IC4141 PAT/NJM4580ED-T1
C4148 PAT/UN
C4150 PAT/UN
IC4147 PAT/MC14052BF-R
R4154 PAT/RE
R4156 PAT/RE
R4157 PAT/RE
R4153 PAT/RE
R4155 PAT/RE
VR4141 PAT/VR1
CH4CMR
R4178 PAT/J6
IC4142 PAT/NJM4580ED-T1
R4159 PAT/J6
R4158 PAT/J6
VR4142 PAT/VR2
CH4 IN LEVEL
CH4_IN_SEL_0
CH4_IN_SEL_1
C4162 PAT/UFN
C4163 PAT/UFN
IC4147 PAT/MC14052BF-R
IC4149 PAT/MC14052BF-R

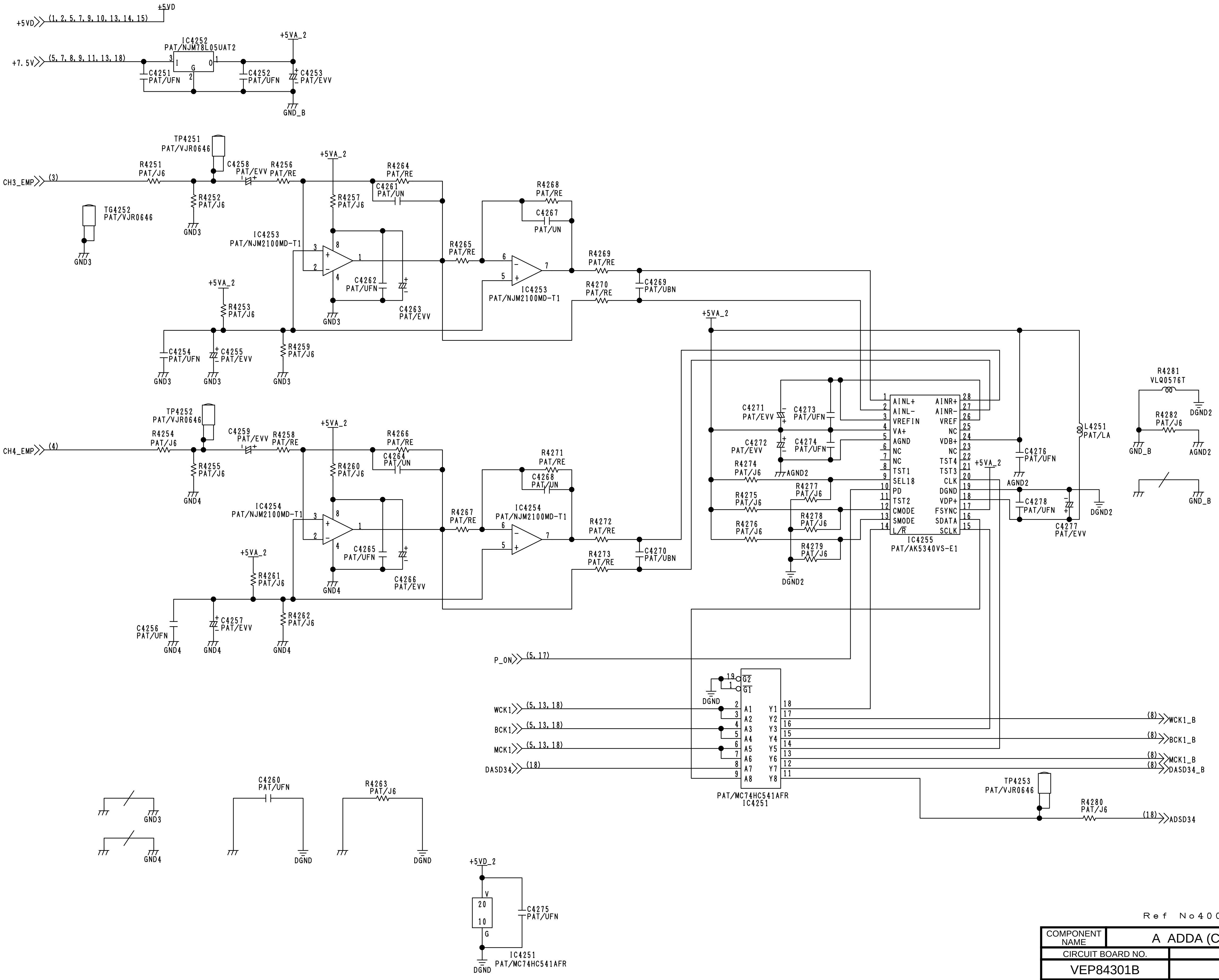
Ref No4000 Series (4141-4180)
R(4686-4700)

COMPONENT NAME	A ADDA (CH 4 INPUT)	04/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM159	


+5VD
+5VD (1, 2, 6, 7, 9, 10, 13, 14, 15)
+7.5V (6, 7, 8, 9, 11, 13, 18)
IC4202
NJM78L05UAT2
C4201
0.1/UFN
C4202
0.1/UFN
+5VA
C4203
6V100/EVV
GND_A
TP4201
VJR0646
CH1_EMP (1)
R4201
330/J6
C4208
16V22/EVV
R4206
10K/RE
R4202
10K/J6
GND1
TG4202
VJR0646
R4207
10/J6
R4214
10K/RE
C4211
33P/UN
IC4203
NJM2100MD-T1
C4212
0.1/UFN
C4213
6V47/EVV
R4215
10K/RE
R4218
10K/RE
C4217
33P/UN
R4219
330/RE
R4220
330/RE
C4219
1500P/UBN
R4203
4700/J6
C4204
0.1/UFN
C4205
16V10/EVV
R4209
4700/J6
TP4202
VJR0646
CH2_EMP (2)
R4204
330/J6
C4209
16V22/EVV
R4208
10K/RE
R4205
10K/J6
GND2
R4210
10/J6
R4216
10K/RE
C4214
33P/UN
IC4204
NJM2100MD-T1
C4215
0.1/UFN
C4216
6V47/EVV
R4217
10K/RE
R4221
10K/RE
C4218
33P/UN
R4222
330/RE
R4223
330/RE
C4220
1500P/UBN
R4211
4700/J6
C4206
0.1/UFN
C4207
16V10/EVV
R4212
4700/J6
C4221
16V10/EVV
C4223
0.1/UFN
C4222
16V10/EVV
C4224
0.1/UFN
AGND1
R4224
PAT/J6
R4227
0/J6
R4225
PAT/J6
R4228
0/J6
R4226
PAT/J6
R4229
0/J6
DGND1
AINL+
AINL-
VREFIN
VA+
AGND
NC
NC
TST1
SEL18
PD
TST2
CMODE
SMODE
L/R
AINR+
AINR-
VREF
NC
VDB+
NC
TST4
TST3
CLK
DGND
VDP+
FSYNC
SDATA
SCLK
IC4205
AK5340VS-E1
C4226
0.1/UFN
C4228
0.1/UFN
C4227
16V10/EVV
L4201
10U/LA
R4231
VLQ0576T
R4232
0/J6
GND_A
AGND1
P_ON (6, 17)
WCK1 (6, 13, 18)
BCK1 (6, 13, 18)
MCK1 (6, 13, 18)
DASD12 (18)
DGND
G2
G1
A1
A2
A3
A4
A5
A6
A7
A8
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
MC74HC541AFR
IC4201
(7) WCK1_A
(7) BCK1_A
(7) MCK1_A
(7) DASD12_A
TP4203
VJR0646
R4230
0/J6
(18) ADSD12
C4210
PAT/UFN
R4213
PAT/J6
C4225
0.1/UFN
IC4201
MC74HC541AFR
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

Ref No4000 Series (4201-4250)

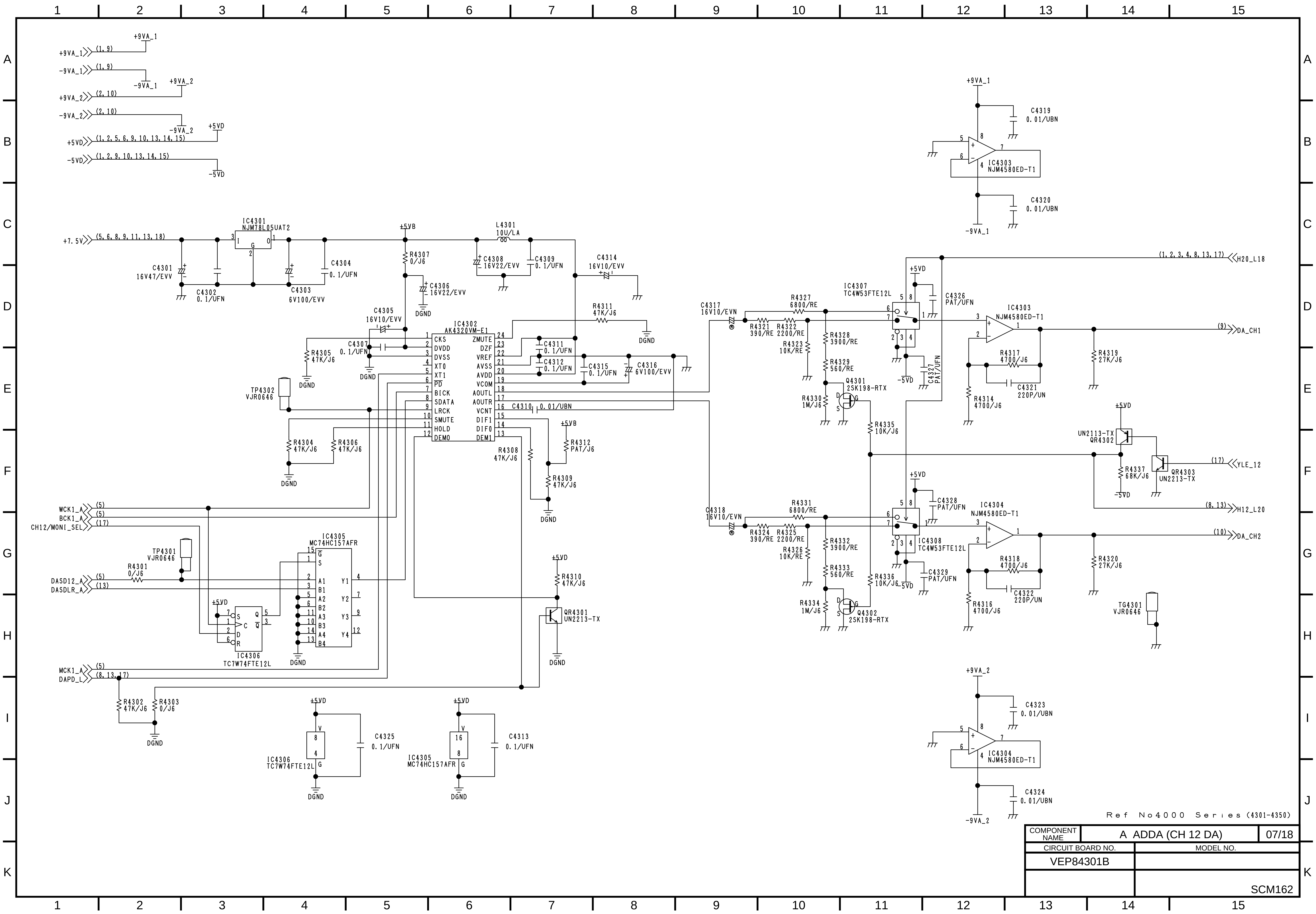
COMPONENT NAME	A ADDA (CH 12 AD)	05/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM160	



+5VD
(1, 2, 5, 7, 9, 10, 13, 14, 15)
+5VD
+7.5V
(5, 7, 8, 9, 11, 13, 18)
IC4252
PAT/NJM78L05UAT2
+5VA_2
C4251 PAT/UFN
C4252 PAT/UFN
C4253 PAT/EVV
GND_B
TP4251 PAT/VJR0646
CH3_EMP (3)
R4251 PAT/J6
C4258 PAT/EVV
R4256 PAT/RE
R4264 PAT/RE
C4261 PAT/UN
R4252 PAT/J6
GND3
TG4252 PAT/VJR0646
GND3
R4257 PAT/J6
IC4253 PAT/NJM2100MD-T1
R4268 PAT/RE
C4267 PAT/UN
R4265 PAT/RE
R4269 PAT/RE
C4262 PAT/UFN
C4263 PAT/EVV
IC4253 PAT/NJM2100MD-T1
R4270 PAT/RE
C4269 PAT/UBN
R4253 PAT/J6
C4254 PAT/UFN
C4255 PAT/EVV
R4259 PAT/J6
GND3
TP4252 PAT/VJR0646
CH4_EMP (4)
R4254 PAT/J6
C4259 PAT/EVV
R4258 PAT/RE
R4266 PAT/RE
C4264 PAT/UN
R4255 PAT/J6
GND4
R4260 PAT/J6
R4271 PAT/RE
C4268 PAT/UN
IC4254 PAT/NJM2100MD-T1
R4267 PAT/RE
R4272 PAT/RE
C4265 PAT/UFN
C4266 PAT/EVV
R4273 PAT/RE
C4270 PAT/UBN
R4261 PAT/J6
C4256 PAT/UFN
C4257 PAT/EVV
R4262 PAT/J6
GND4
C4271 PAT/EVV
C4273 PAT/UFN
C4272 PAT/EVV
C4274 PAT/UFN
AGND2
R4274 PAT/J6
R4275 PAT/J6
R4276 PAT/J6
R4277 PAT/J6
R4278 PAT/J6
R4279 PAT/J6
DGND2
AINL+ AINL- VREFIN VA+ AGND NC NC TST1 SEL18 PD TST2 CMODE SMODE L/R
AINR+ AINR- VREF NC VDB+ NC TST4 TST3 CLK DGND VDP+ FSYNC SDATA SCLK
IC4255 PAT/AK5340VS-E1
C4276 PAT/UFN
C4278 PAT/UFN
C4277 PAT/EVV
L4251 PAT/LA
R4281 VLQ0576T
DGND2
R4282 PAT/J6
GND_B
AGND2
GND_B
P_ON (5, 17)
WCK1 (5, 13, 18)
BCK1 (5, 13, 18)
MCK1 (5, 13, 18)
DASD34 (18)
DGND
G2 G1 A1 A2 A3 A4 A5 A6 A7 A8 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
PAT/MC74HC541AFR
IC4251
(8) WCK1_B
(8) BCK1_B
(8) MCK1_B
(8) DASD34_B
TP4253 PAT/VJR0646
R4280 PAT/J6
(18) ADSD34
GND3
GND4
C4260 PAT/UFN
DGND
R4263 PAT/J6
DGND
+5VD_2
C4275 PAT/UFN
IC4251 PAT/MC74HC541AFR
DGND

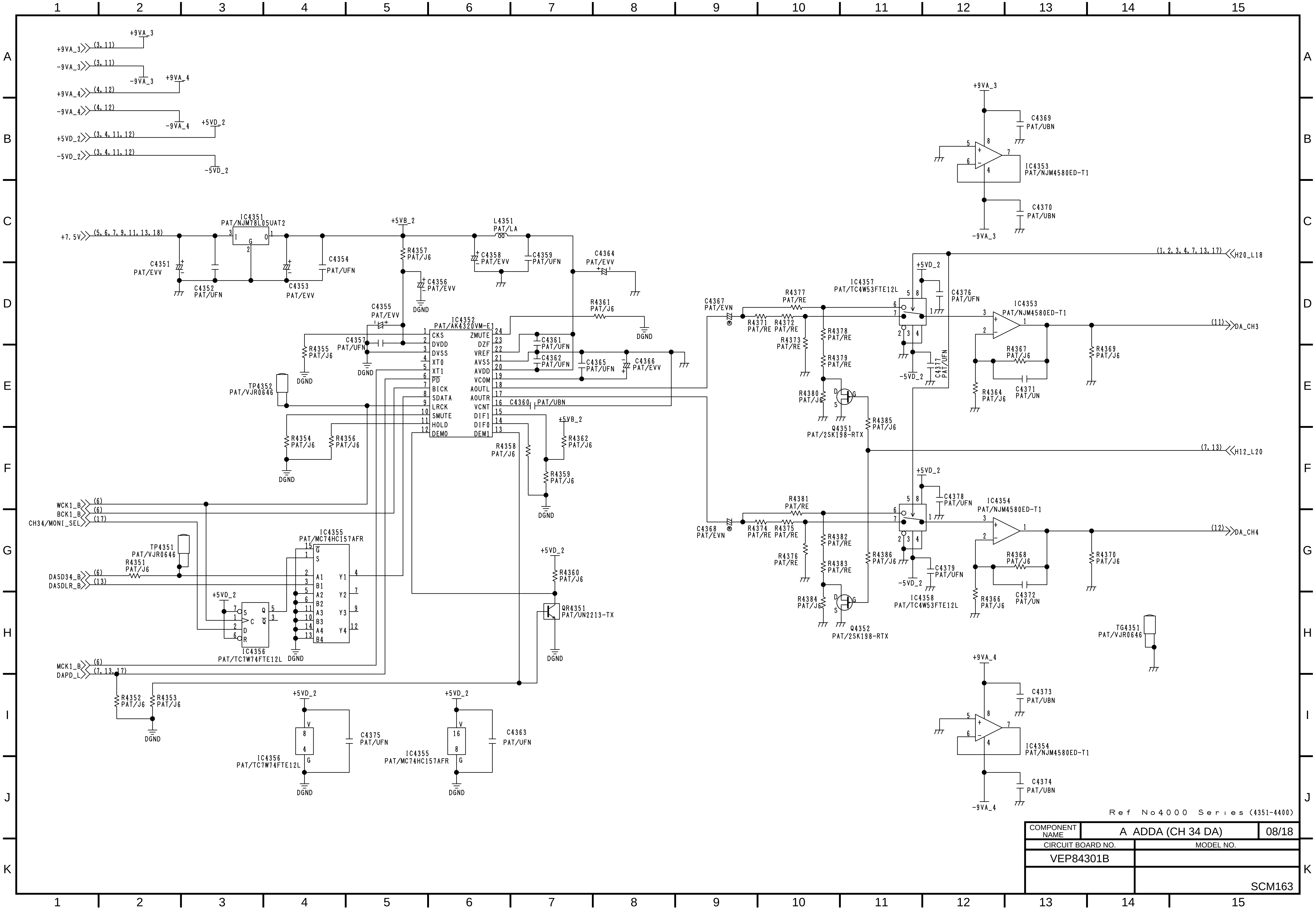
Ref No4000 Series (4251-4300)

COMPONENT NAME	A ADDA (CH 34 AD)	06/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM161	


+9VA_1
-9VA_1
+9VA_2
-9VA_2
+5VD
-5VD
+7.5V
(5, 6, 8, 9, 11, 13, 18)
IC4301
NJM78L05UAT2
C4301
16V47/EVV
C4302
0.1/UFN
C4303
6V100/EVV
C4304
0.1/UFN
+5VB
R4307
0/J6
C4306
16V22/EVV
L4301
10U/LA
C4308
16V22/EVV
C4309
0.1/UFN
C4314
16V10/EVV
R4311
47K/J6
C4305
16V10/EVV
C4307
0.1/UFN
IC4302
AK4320VM-E1
CKS
DVDD
DVSS
XT0
XT1
PD
BICK
SDATA
LRCK
SMUTE
HOLD
DEMO
ZMUTE
DZF
VREF
AVSS
AVDD
VCOM
AOUTL
AOUTR
VCNT
DIF1
DIF0
DEM1
C4311
0.1/UFN
C4312
0.1/UFN
C4315
0.1/UFN
C4316
6V100/EVV
C4310
0.01/UBN
R4305
47K/J6
TP4302
VJR0646
R4304
47K/J6
R4306
47K/J6
R4308
47K/J6
R4312
PAT/J6
R4309
47K/J6
DGND
WCK1_A
BCK1_A
CH12/MONI_SEL
TP4301
VJR0646
R4301
0/J6
DASD12_A
DASDLR_A
IC4305
MC74HC157AFR
IC4306
TC7W74FTE12L
R4310
47K/J6
QR4301
UN2213-TX
MCK1_A
DAPD_L
R4302
47K/J6
R4303
0/J6
C4325
0.1/UFN
C4313
0.1/UFN
IC4303
NJM4580ED-T1
C4319
0.01/UBN
C4320
0.01/UBN
H20_L18
(1, 2, 3, 4, 8, 13, 17)
IC4307
TC4W53FTE12L
C4317
16V10/EVN
R4321
390/RE
R4322
2200/RE
R4327
6800/RE
R4323
10K/RE
R4328
3900/RE
R4329
560/RE
R4330
1M/J6
Q4301
2SK198-RTX
R4335
10K/J6
C4326
PAT/UFN
C4327
PAT/UFN
R4317
4700/J6
R4314
4700/J6
C4321
220P/UN
R4319
27K/J6
DA_CH1
UN2113-TX
QR4302
R4337
68K/J6
QR4303
UN2213-TX
YLE_12
H12_L20
(8, 13)
C4318
16V10/EVN
R4324
390/RE
R4325
2200/RE
R4331
6800/RE
R4326
10K/RE
R4332
3900/RE
R4333
560/RE
R4334
1M/J6
Q4302
2SK198-RTX
R4336
10K/J6
IC4308
TC4W53FTE12L
C4328
PAT/UFN
C4329
PAT/UFN
IC4304
NJM4580ED-T1
R4318
4700/J6
R4316
4700/J6
C4322
220P/UN
R4320
27K/J6
DA_CH2
TG4301
VJR0646
C4323
0.01/UBN
C4324
0.01/UBN

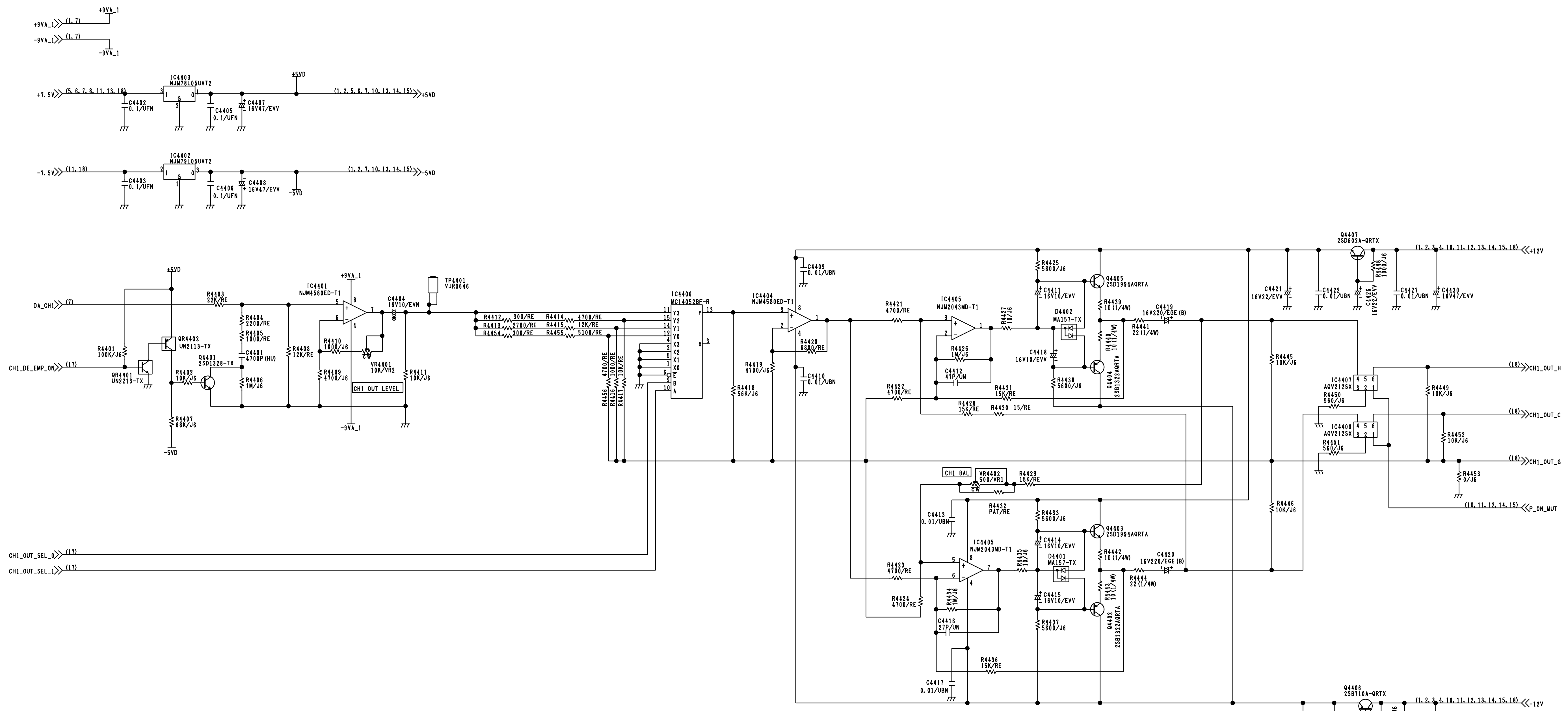
Ref No4000 Series (4301-4350)

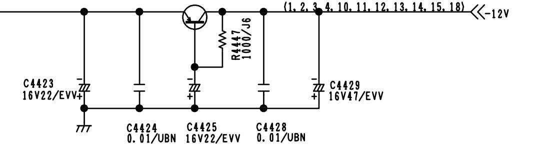
COMPONENT NAME	A ADDA (CH 12 DA)	07/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM162	


+9VA_3 (3, 11)
-9VA_3 (3, 11)
+9VA_4 (4, 12)
-9VA_4 (4, 12)
+5VD_2 (3, 4, 11, 12)
-5VD_2 (3, 4, 11, 12)
+7.5V (5, 6, 7, 9, 11, 13, 18)
IC4351 PAT/NJM78L05UAT2
C4351 PAT/EVV
C4352 PAT/UFN
C4353 PAT/EVV
C4354 PAT/UFN
+5VB_2
R4357 PAT/J6
C4356 PAT/EVV
DGND
L4351 PAT/LA
C4358 PAT/EVV
C4359 PAT/UFN
C4364 PAT/EVV
C4355 PAT/EVV
C4357 PAT/UFN
R4361 PAT/J6
IC4352 PAT/AK4320VM-E1
CKS DVDD DVSS XTO XTI PD BICK SDATA LRCK SMUTE HOLD DEMO
ZMUTE DZF VREF AVSS AVDD VCOM AOUTL AOUTR VCNT DIF1 DIF0 DEM1
C4361 PAT/UFN
C4362 PAT/UFN
C4365 PAT/UFN
C4366 PAT/EVV
C4360 PAT/UBN
R4355 PAT/J6
TP4352 PAT/VJR0646
R4354 PAT/J6
R4356 PAT/J6
R4358 PAT/J6
R4362 PAT/J6
R4359 PAT/J6
WCK1_B (6)
BCK1_B (6)
CH34/MONI_SEL (17)
TP4351 PAT/VJR0646
R4351 PAT/J6
DASD34_B (6)
DASDLR_B (13)
IC4355 PAT/MC74HC157AFR
IC4356 PAT/TC7W74FTE12L
+5VD_2
R4360 PAT/J6
QR4351 PAT/UN2213-TX
MCK1_B (6)
DAPD_L (7, 13, 17)
R4352 PAT/J6
R4353 PAT/J6
C4375 PAT/UFN
C4363 PAT/UFN
C4369 PAT/UBN
IC4353 PAT/NJM4580ED-T1
C4370 PAT/UBN
H20_L18 (1, 2, 3, 4, 7, 13, 17)
IC4357 PAT/TC4W53FTE12L
C4376 PAT/UFN
C4367 PAT/EVN
R4377 PAT/RE
R4371 PAT/RE
R4372 PAT/RE
R4373 PAT/RE
R4378 PAT/RE
R4379 PAT/RE
R4380 PAT/J6
Q4351 PAT/2SK198-RTX
R4385 PAT/J6
C4377 PAT/UFN
R4367 PAT/J6
R4364 PAT/J6
C4371 PAT/UN
R4369 PAT/J6
DA_CH3 (11)
H12_L20 (7, 13)
C4368 PAT/EVN
R4381 PAT/RE
R4374 PAT/RE
R4375 PAT/RE
R4376 PAT/RE
R4382 PAT/RE
R4383 PAT/RE
R4384 PAT/J6
Q4352 PAT/2SK198-RTX
R4386 PAT/J6
C4378 PAT/UFN
C4379 PAT/UFN
IC4358 PAT/TC4W53FTE12L
IC4354 PAT/NJM4580ED-T1
R4368 PAT/J6
R4366 PAT/J6
C4372 PAT/UN
R4370 PAT/J6
DA_CH4 (12)
TG4351 PAT/VJR0646
C4373 PAT/UBN
C4374 PAT/UBN
-5VD_2
+9VA_4
-9VA_4

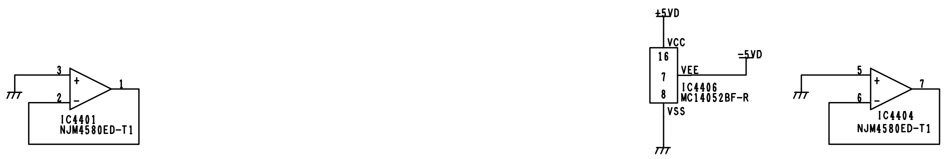
Ref No4000 Series (4351-4400)

COMPONENT NAME	A ADDA (CH 34 DA)	08/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM163	


+9VA_1
+9VA_1
(1, 7)
-9VA_1
(1, 7)
-9VA_1
+7.5V
(5, 6, 7, 8, 11, 13, 18)
IC4403
NJM78L05UAT2
I
G
O
C4402
0.1/UFN
C4405
0.1/UFN
C4407
16V47/EVV
+5VD
(1, 2, 5, 6, 7, 10, 13, 14, 15)
+5VD
-7.5V
(11, 18)
IC4402
NJM79L05UAT2
C4403
0.1/UFN
C4406
0.1/UFN
C4408
16V47/EVV
-5VD
(1, 2, 7, 10, 13, 14, 15)
-5VD
+5VD
DA_CH1
(7)
R4403
22K/RE
R4404
2200/RE
R4405
1000/RE
C4401
4700P (HU)
R4406
1M/J6
R4401
100K/J6
QR4402
UN2113-TX
CH1_DE_EMP_ON
(17)
QR4401
UN2213-TX
Q4401
2SD1328-TX
R4402
10K/J6
R4407
68K/J6
-5VD
R4408
12K/RE
IC4401
NJM4580ED-T1
+9VA_1
-9VA_1
R4410
1000/J6
R4409
4700/J6
VR4401
10K/VR2
CW
CH1 OUT LEVEL
C4404
16V10/EVN
R4411
10K/J6
TP4401
VJR0646
R4412 300/RE
R4413 2700/RE
R4454 300/RE
R4414 4700/RE
R4415 12K/RE
R4455 5100/RE
R4456 4700/RE
R4416 1000/RE
R4417 10K/RE
IC4406
MC14052BF-R
Y3
Y2
Y1
Y0
X3
X2
X1
X0
E
B
A
Y
X
R4418
56K/J6
IC4404
NJM4580ED-T1
R4419
4700/J6
R4420
6800/RE
C4409
0.01/UBN
C4410
0.01/UBN
CH1_OUT_SEL_0
(17)
CH1_OUT_SEL_1
(17)
R4421
4700/RE
IC4405
NJM2043MD-T1
R4426
1M/J6
C4412
47P/UN
R4427
10/J6
R4425
5600/J6
C4411
16V10/EVV
D4402
MA157-TX
C4418
16V10/EVV
R4438
5600/J6
Q4405
2SD1994AQRTA
R4439
10 (1/4W)
R4440
10 (1/4W)
Q4404
2SB1322AQRTA
R4441
22 (1/4W)
C4419
16V220/EGE (B)
R4422
4700/RE
R4431
15K/RE
R4428
15K/RE
R4430 15/RE
CH1 BAL
VR4402
500/VR1
CW
R4429
15K/RE
R4432
PAT/RE
C4413
0.01/UBN
R4433
5600/J6
Q4403
2SD1994AQRTA
C4414
16V10/EVV
IC4405
NJM2043MD-T1
R4423
4700/RE
R4424
4700/RE
R4434
1M/J6
C4416
27P/UN
R4435
10/J6
D4401
MA157-TX
C4415
16V10/EVV
R4437
5600/J6
R4442
10 (1/4W)
R4443
10 (1/4W)
Q4402
2SB1322AQRTA
R4444
22 (1/4W)
C4420
16V220/EGE (B)
R4436
15K/RE
C4417
0.01/UBN
Q4407
2SD602A-QRTX
(1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 18)
+12V
C4421
16V22/EVV
C4422
0.01/UBN
C4426
16V22/EVV
R4448
1000/J6
C4427
0.01/UBN
C4430
16V47/EVV
R4445
10K/J6
R4446
10K/J6
IC4407
AQV212SX
R4450
560/J6
IC4408
AQV212SX
R4451
560/J6
R4449
10K/J6
R4452
10K/J6
R4453
0/J6
(18)
CH1_OUT_H
(18)
CH1_OUT_C
(18)
CH1_OUT_G
(10, 11, 12, 14, 15)
P_ON_MUT
Q4406
2SB710A-QRTX
(1, 2, 3, 4, 10, 11, 12, 13, 14, 15, 18)
-12V

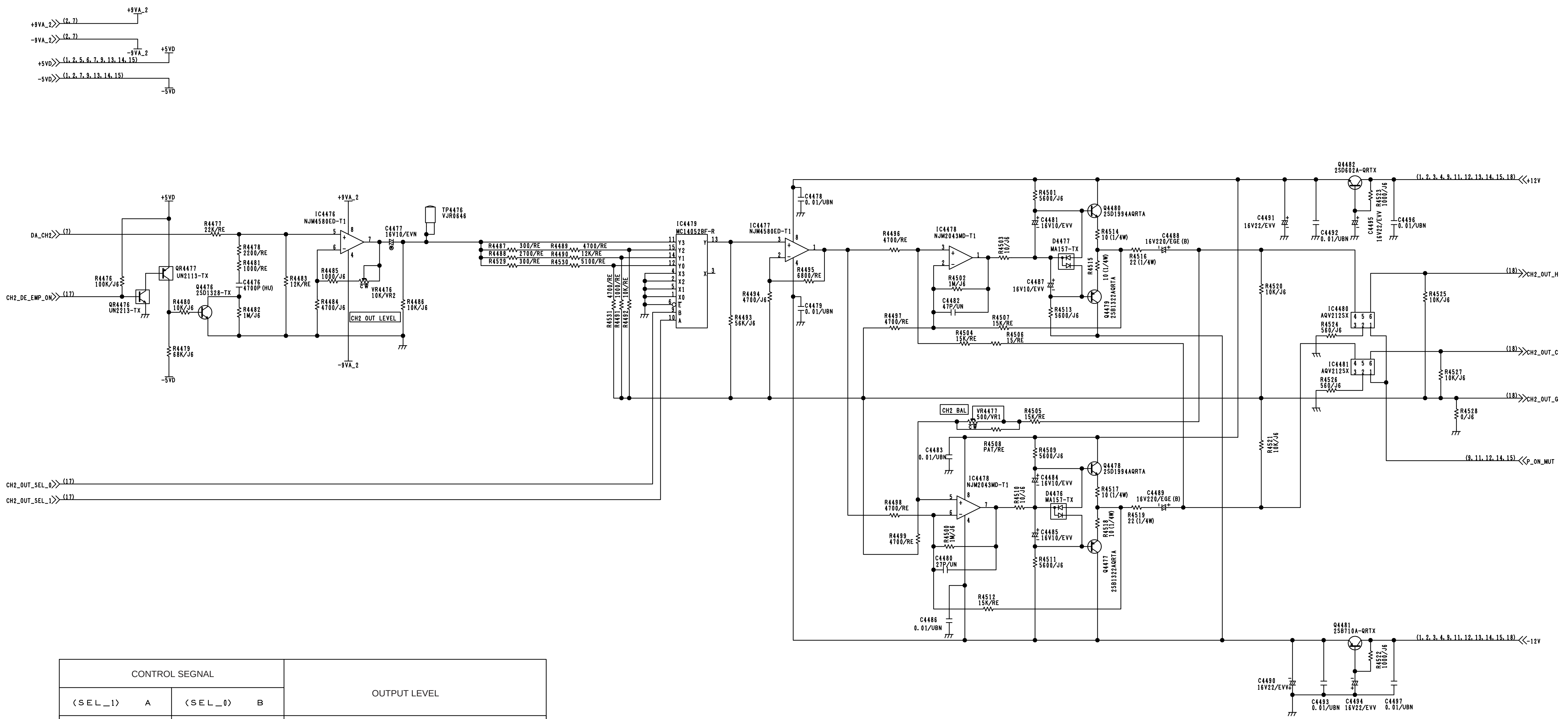

C4423
16V22/EVV
C4424
0.01/UBN
C4425
16V22/EVV
R4447
1000/J6
C4428
0.01/UBN
C4429
16V47/EVV

CONTROL SEGNAL		OUTPUT LEVEL	
(SEL_1) A	(SEL_0) B		
0	0	Y0	−3dBu
1	0	Y1	−20dBu
0	1	Y2	0dBu
1	1	Y3	+4dBu

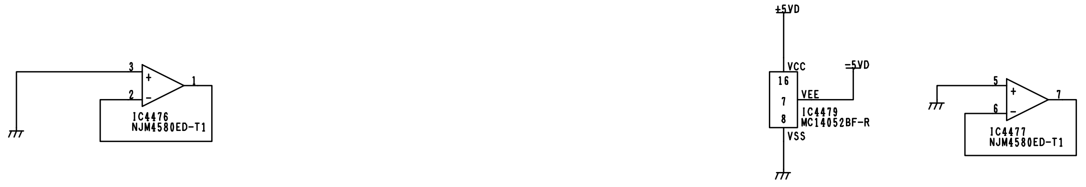

IC4401
NJM4580ED-T1
+5VD
VCC
VEE
-5VD
IC4406
MC14052BF-R
VSS
IC4404
NJM4580ED-T1

Ref No4000 Series (4401-4475)
R (4401-4460)

COMPONENT NAME	A ADDA (CH 1 OUTPUT)	09/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM164	

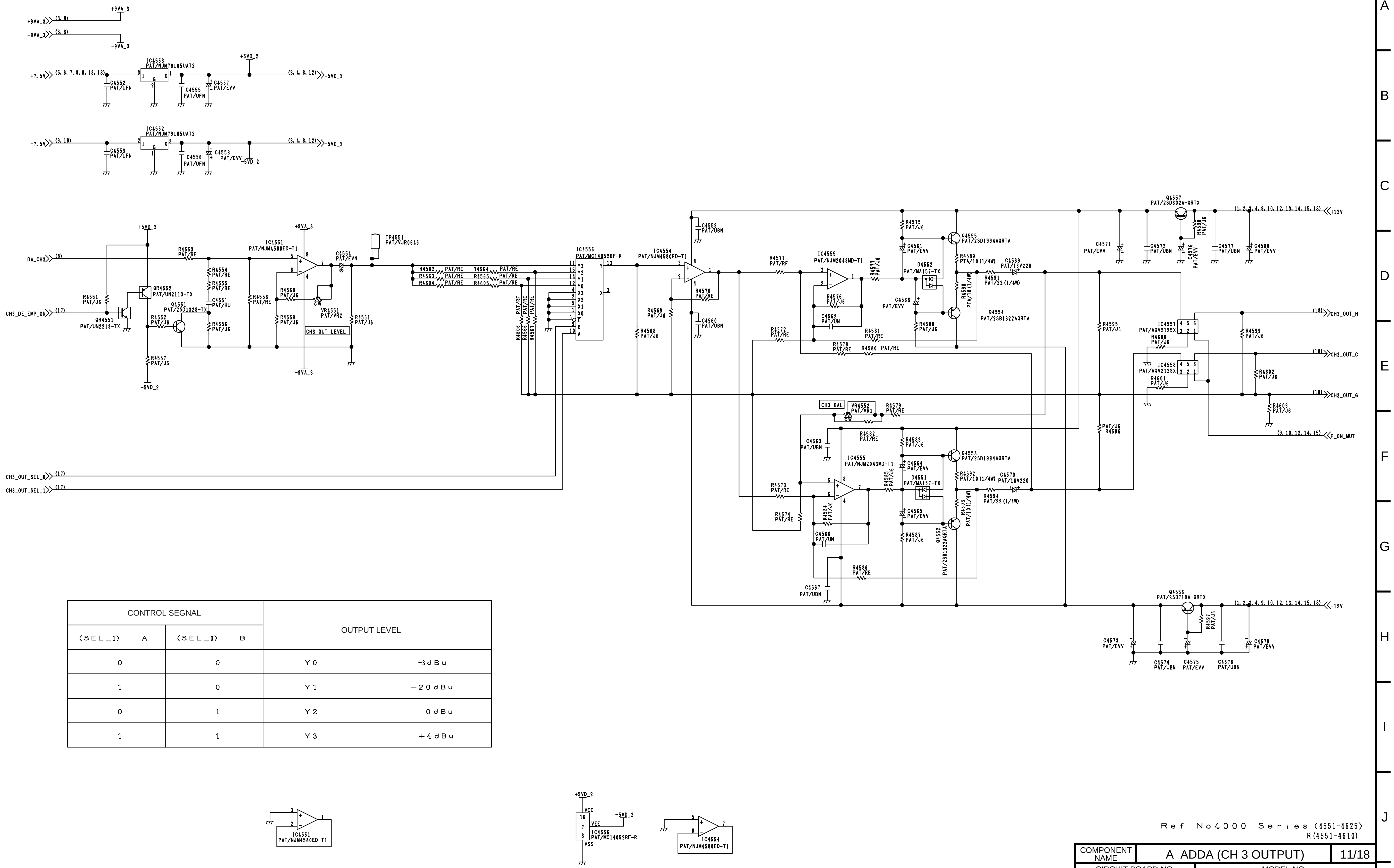

+9VA_2 (2, 7) +9VA_2
-9VA_2 (2, 7) -9VA_2
+5VD (1, 2, 5, 6, 7, 9, 13, 14, 15) +5VD
-5VD (1, 2, 7, 9, 13, 14, 15) -5VD
DA_CH2 (7)
CH2_DE_EMP_ON (17)
R4476 100K/J6
QR4476 UN2213-TX
QR4477 UN2113-TX
R4477 22K/RE
R4479 68K/J6
R4480 10K/J6
Q4476 2SD1328-TX
R4478 2200/RE
R4481 1000/RE
C4476 4700P (HU)
R4482 1M/J6
R4483 12K/RE
IC4476 NJM4580ED-T1
R4485 1000/J6
R4484 4700/J6
VR4476 10K/VR2
CW
CH2 OUT LEVEL
C4477 16V10/EVN
R4486 10K/J6
TP4476 VJR0646
R4487 300/RE
R4488 2700/RE
R4529 300/RE
R4489 4700/RE
R4490 12K/RE
R4530 5100/RE
R4531 4700/RE
R4491 1000/RE
R4492 10K/RE
IC4479 MC14052BF-R
Y3 Y2 Y1 Y0 X3 X2 X1 X0 E B A Y X
IC4477 NJM4580ED-T1
R4494 4700/J6
R4493 56K/J6
R4495 6800/RE
C4478 0.01/UBN
C4479 0.01/UBN
CH2_OUT_SEL_0 (17)
CH2_OUT_SEL_1 (17)
R4496 4700/RE
R4497 4700/RE
IC4478 NJM2043MD-T1
R4502 1M/J6
C4482 47P/UN
R4503 10/J6
R4504 15K/RE
R4506 15/RE
R4507 15K/RE
R4501 5600/J6
C4481 16V10/EVV
D4477 MA157-TX
C4487 16V10/EVV
R4513 5600/J6
Q4480 2SD1994AQRTA
R4514 10 (1/4W)
R4515 10 (1/4W)
Q4479 2SB1322AQRTA
R4516 22 (1/4W)
C4488 16V220/EGE (B)
R4520 10K/J6
C4491 16V22/EVV
C4492 0.01/UBN
Q4482 2SD602A-QRTX
C4495 16V22/EVV
R4523 1000/J6
C4496 0.01/UBN
(1, 2, 3, 4, 9, 11, 12, 13, 14, 15, 18) +12V
IC4480 AQV212SX
R4524 560/J6
IC4481 AQV212SX
R4526 560/J6
R4525 10K/J6
R4527 10K/J6
R4528 0/J6
(18) CH2_OUT_H
(18) CH2_OUT_C
(18) CH2_OUT_G
(9, 11, 12, 14, 15) P_ON_MUT
CH2 BAL
VR4477 500/VR1
R4505 15K/RE
C4483 0.01/UBN
R4508 PAT/RE
R4509 5600/J6
C4484 16V10/EVV
Q4478 2SD1994AQRTA
R4517 10 (1/4W)
IC4478 NJM2043MD-T1
R4498 4700/RE
R4499 4700/RE
R4500 1M/J6
C4480 27P/UN
R4510 10/J6
D4476 MA157-TX
C4485 16V10/EVV
R4511 5600/J6
R4518 10 (1/4W)
Q4477 2SB1322AQRTA
R4519 22 (1/4W)
C4489 16V220/EGE (B)
R4521 10K/J6
R4512 15K/RE
C4486 0.01/UBN
Q4481 2SB710A-QRTX
R4522 1000/J6
(1, 2, 3, 4, 9, 11, 12, 13, 14, 15, 18) -12V
C4490 16V22/EVV
C4493 0.01/UBN
C4494 16V22/EVV
C4497 0.01/UBN

CONTROL SEGNAL		OUTPUT LEVEL	
(SEL_1) A	(SEL_0) B		
0	0	Y0	-3dBu
1	0	Y1	−20dBu
0	1	Y2	0dBu
1	1	Y3	+4dBu


IC4476 NJM4580ED-T1
+5VD
VCC
-5VD
VEE
VSS
IC4479 MC14052BF-R
IC4477 NJM4580ED-T1

Ref No4000 Series (4476-4550)
R (4476-4535)

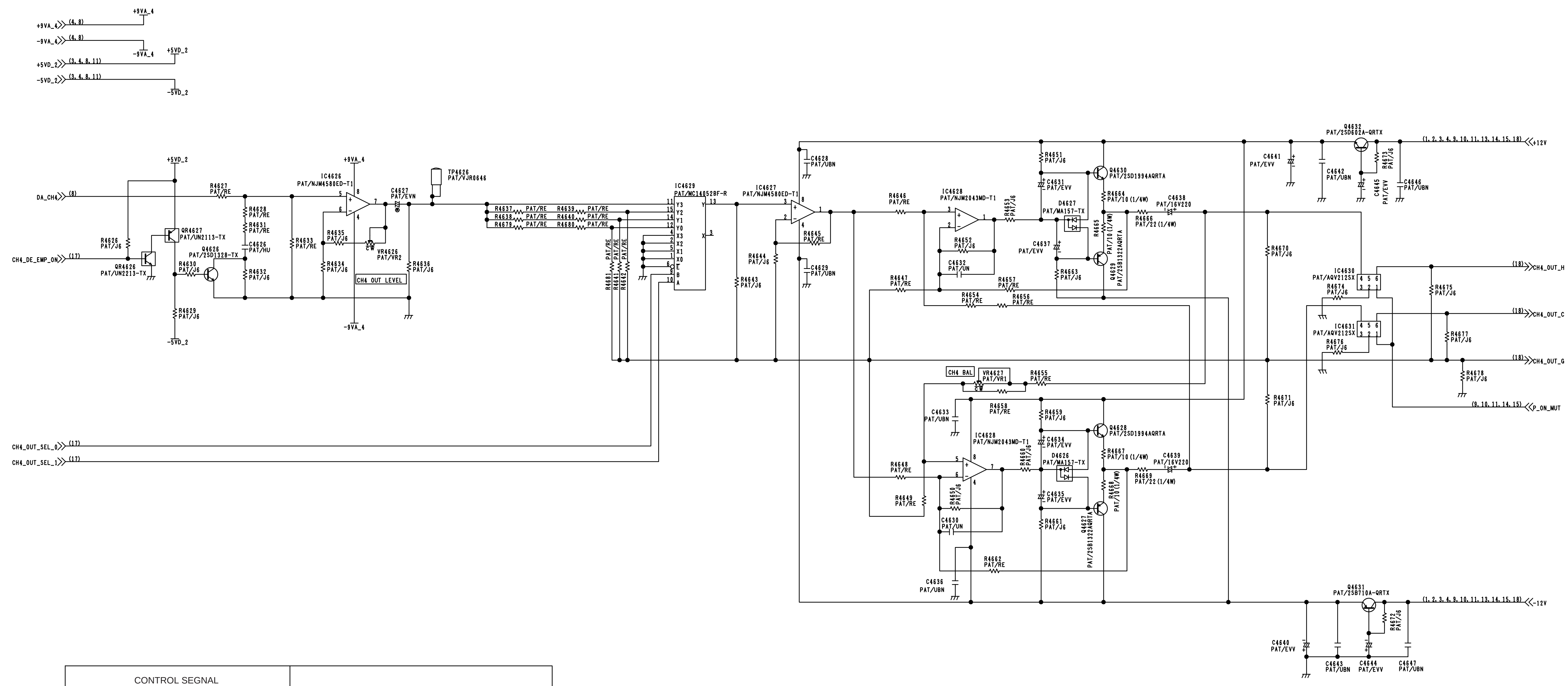
COMPONENT NAME	A ADDA (CH 2 OUTPUT)	10/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM165	


+9VA_3
-9VA_3
+7.5V
IC4553 PAT/NJM78L05UAT2
+5VD_2
-7.5V
IC4552 PAT/NJM79L05UAT2
-5VD_2
DA_CH3
CH3_DE_EMP_ON
QR4552 PAT/UN2113-TX
QR4551 PAT/UN2113-TX
Q4551 PAT/2SD1328-TX
IC4551 PAT/NJM4580ED-T1
TP4551 PAT/VJR0646
VR4551 PAT/VR2
CH3 OUT LEVEL
IC4556 PAT/MC14052BF-R
IC4554 PAT/NJM4580ED-T1
IC4555 PAT/NJM2043MD-T1
Q4555 PAT/2SD1994AQRTA
Q4554 PAT/2SB1322AQRTA
D4552 PAT/MA157-TX
Q4557 PAT/2SD602A-QRTX
+12V
IC4557 PAT/AQV212SX
IC4558 PAT/AQV212SX
CH3_OUT_H
CH3_OUT_C
CH3_OUT_G
P_ON_MUT
CH3 BAL
VR4552 PAT/VR1
Q4553 PAT/2SD1994AQRTA
Q4552 PAT/2SB1322AQRTA
D4551 PAT/MA157-TX
CH3_OUT_SEL_0
CH3_OUT_SEL_1
Q4556 PAT/2SB710A-QRTX
-12V

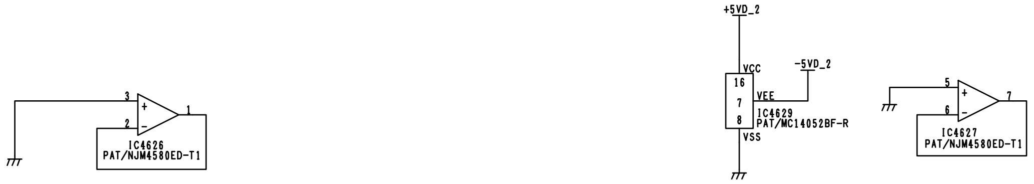
CONTROL SEGNAL		OUTPUT LEVEL	
(SEL_1) A	(SEL_0) B		
0	0	Y0	-3dBu
1	0	Y1	−20dBu
0	1	Y2	0dBu
1	1	Y3	+4dBu

Ref No4000 Series (4551-4625)
R(4551-4610)

COMPONENT NAME	A ADDA (CH 3 OUTPUT)	11/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM166	

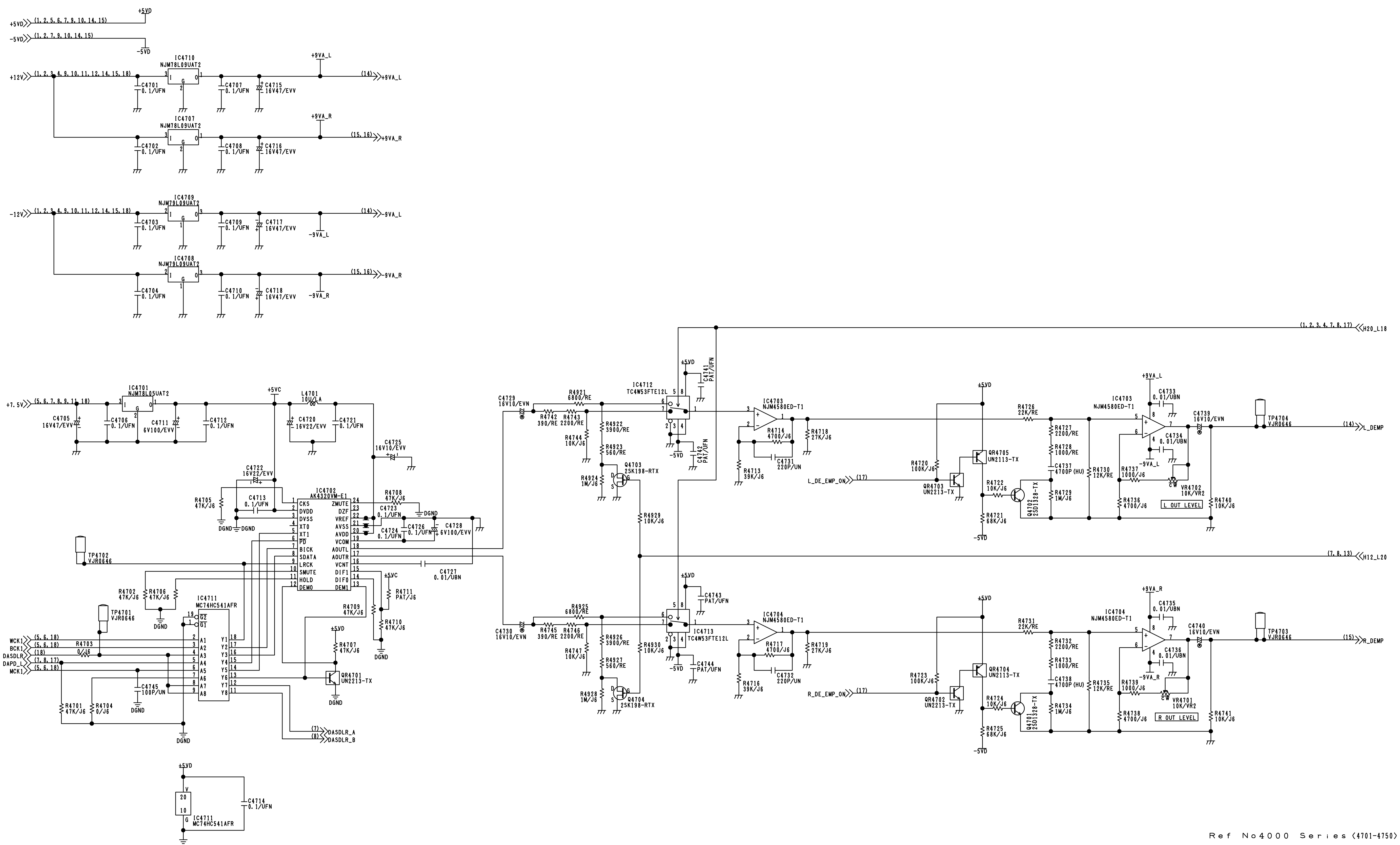

+9VA_4
-9VA_4
+5VD_2
-5VD_2
DA_CH4
CH4_DE_EMP_ON
CH4_OUT_SEL_0
CH4_OUT_SEL_1
QR4627 PAT/UN2113-TX
QR4626 PAT/UN2213-TX
Q4626 PAT/2SD1328-TX
IC4626 PAT/NJM4580ED-T1
VR4626 PAT/VR2
CH4 OUT LEVEL
TP4626 PAT/VJR0646
C4627 PAT/EVN
IC4629 PAT/MC14052BF-R
IC4627 PAT/NJM4580ED-T1
IC4628 PAT/NJM2043MD-T1
Q4630 PAT/2SD1994AQRTA
Q4628 PAT/2SD1994AQRTA
Q4629 PAT/2SB1322AQRTA
Q4627 PAT/2SB1322AQRTA
D4627 PAT/MA157-TX
D4626 PAT/MA157-TX
C4638 PAT/16V220
C4639 PAT/16V220
R4664 PAT/10(1/4W)
R4666 PAT/22(1/4W)
R4667 PAT/10(1/4W)
R4669 PAT/22(1/4W)
CH4 BAL
VR4627 PAT/VR1
IC4630 PAT/AQV212SX
IC4631 PAT/AQV212SX
Q4632 PAT/2SD602A-QRTX
Q4631 PAT/2SB710A-QRTX
+12V
-12V
CH4_OUT_H
CH4_OUT_C
CH4_OUT_G
P_ON_MUT

CONTROL SEGNAL		OUTPUT LEVEL	
(SEL_1) A	(SEL_0) B		
0	0	Y0	-3dBu
1	0	Y1	−20dBu
0	1	Y2	0dBu
1	1	Y3	+4dBu


+5VD_2
-5VD_2
IC4626 PAT/NJM4580ED-T1
IC4629 PAT/MC14052BF-R
IC4627 PAT/NJM4580ED-T1
VCC
VEE
VSS

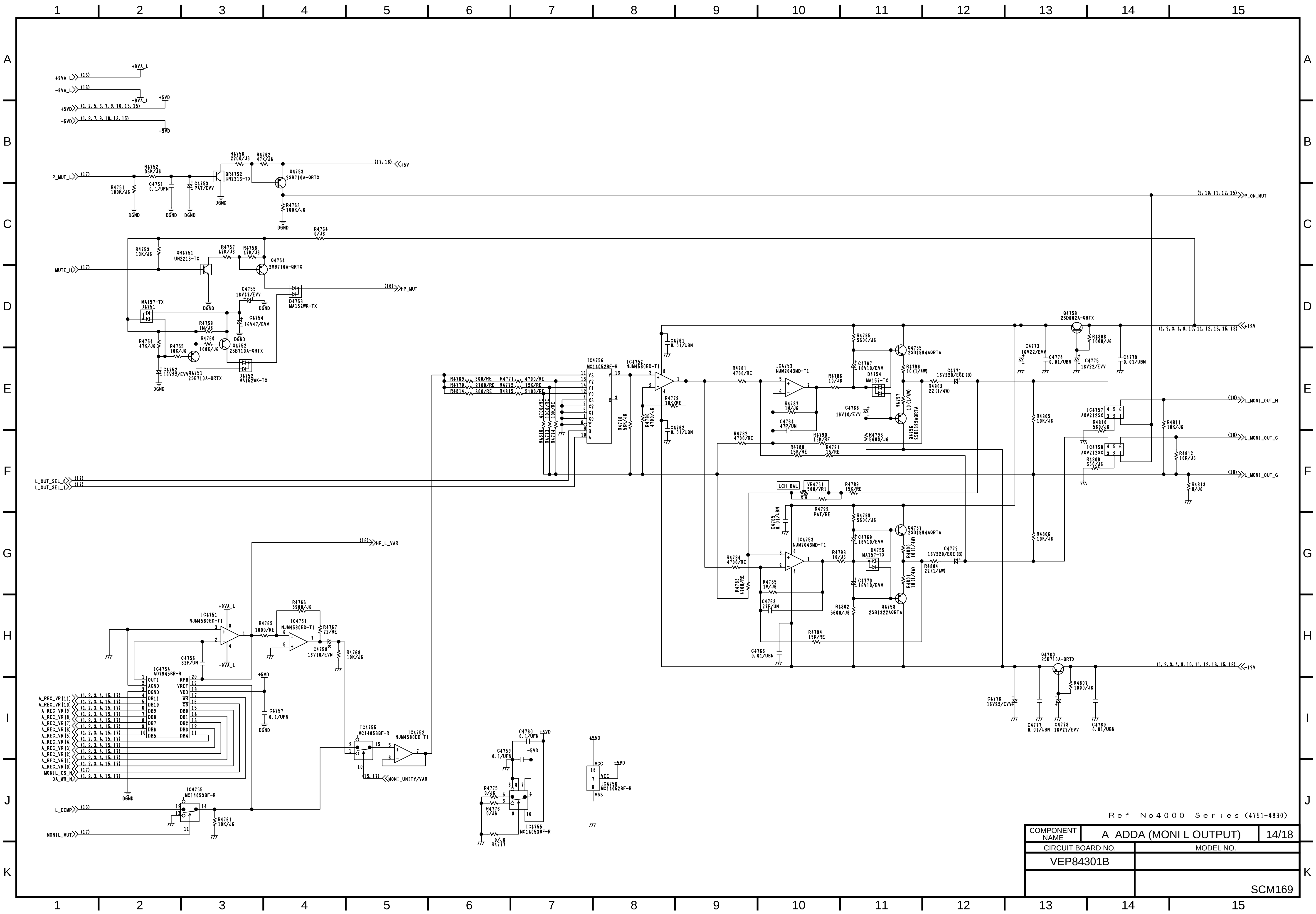
Ref No4000 Series (4626-4700)
R(4626-4685)

COMPONENT NAME	A ADDA (CH 4 OUTPUT)	12/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM167	


+5VD (1, 2, 5, 6, 7, 9, 10, 14, 15)
-5VD (1, 2, 7, 9, 10, 14, 15)
+12V (1, 2, 3, 4, 9, 10, 11, 12, 14, 15, 18)
IC4710 NJM78L09UAT2
C4701 0.1/UFN
C4707 0.1/UFN
C4715 16V47/EVV
+9VA_L
(14) +9VA_L
IC4707 NJM78L09UAT2
C4702 0.1/UFN
C4708 0.1/UFN
C4716 16V47/EVV
+9VA_R
(15, 16) +9VA_R
-12V (1, 2, 3, 4, 9, 10, 11, 12, 14, 15, 18)
IC4709 NJM79L09UAT2
C4703 0.1/UFN
C4709 0.1/UFN
C4717 16V47/EVV
-9VA_L
(14) -9VA_L
IC4708 NJM79L09UAT2
C4704 0.1/UFN
C4710 0.1/UFN
C4718 16V47/EVV
-9VA_R
(15, 16) -9VA_R
+7.5V (5, 6, 7, 8, 9, 11, 18)
IC4701 NJM78L05UAT2
C4705 16V47/EVV
C4706 0.1/UFN
C4711 6V100/EVV
C4712 0.1/UFN
+5VC
L4701 10U/LA
C4720 16V22/EVV
C4721 0.1/UFN
C4725 16V10/EVV
C4722 16V22/EVV
R4705 47K/J6
C4713 0.1/UFN
DGND
IC4702 AK4320VM-E1
1 CKS
2 DVDD
3 DVSS
4 XT0
5 XT1
6 PD
7 BICK
8 SDATA
9 LRCK
10 SMUTE
11 HOLD
12 DEM0
24 ZMUTE
23 DZF
22 VREF
21 AVSS
20 AVDD
19 VCOM
18 AOUTL
17 AOUTR
16 VCNT
15 DIF1
14 DIF0
13 DEM1
R4708 47K/J6
C4723 0.1/UFN
C4724 0.1/UFN
C4726 0.1/UFN
C4728 6V100/EVV
C4727 0.01/UBN
R4711 PAT/J6
R4709 47K/J6
R4710 47K/J6
R4707 47K/J6
QR4701 UN2213-TX
TP4702 VJR0646
TP4701 VJR0646
R4702 47K/J6
R4706 47K/J6
IC4711 MC74HC541AFR
G2 G1 A1 A2 A3 A4 A5 A6 A7 A8 Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
WCK1 (5, 6, 18)
BCK1 (5, 6, 18)
DASDLR (18)
DAPD_L (7, 8, 17)
MCK1 (5, 6, 18)
R4703 0/J6
C4745 100P/UN
R4701 47K/J6
R4704 0/J6
(7) DASDLR_A
(8) DASDLR_B
+5VD
C4714 0.1/UFN
IC4711 MC74HC541AFR
C4729 16V10/EVN
R4921 6800/RE
R4742 390/RE
R4743 2200/RE
R4744 10K/J6
R4922 3900/RE
R4923 560/RE
R4924 1M/J6
Q4703 2SK198-RTX
R4929 10K/J6
IC4712 TC4W53FTE12L
C4741 PAT/UFN
C4742 PAT/UFN
-5VD
IC4703 NJM4580ED-T1
R4714 4700/J6
C4731 220P/UN
R4713 39K/J6
R4718 27K/J6
(1, 2, 3, 4, 7, 8, 17) H20_L18
L_DE_EMP_ON (17)
R4720 100K/J6
QR4703 UN2213-TX
QR4705 UN2113-TX
R4722 10K/J6
R4721 68K/J6
Q4702 2SD1328-TX
R4726 22K/RE
R4727 2200/RE
R4728 1000/RE
C4737 4700P (HU)
R4729 1M/J6
R4730 12K/RE
IC4703 NJM4580ED-T1
C4733 0.01/UBN
C4734 0.01/UBN
R4737 1000/J6
VR4702 10K/VR2
CW
R4736 4700/J6
L OUT LEVEL
C4739 16V10/EVN
R4740 10K/J6
TP4704 VJR0646
(14) L_DEMP
(7, 8, 13) H12_L20
C4730 16V10/EVN
R4925 6800/RE
R4745 390/RE
R4746 2200/RE
R4747 10K/J6
R4926 3900/RE
R4927 560/RE
R4928 1M/J6
Q4704 2SK198-RTX
R4930 10K/J6
IC4713 TC4W53FTE12L
C4743 PAT/UFN
C4744 PAT/UFN
IC4704 NJM4580ED-T1
R4717 4700/J6
C4732 220P/UN
R4716 39K/J6
R4719 27K/J6
R_DE_EMP_ON (17)
R4723 100K/J6
QR4702 UN2213-TX
QR4704 UN2113-TX
R4724 10K/J6
R4725 68K/J6
Q4701 2SD1328-TX
R4731 22K/RE
R4732 2200/RE
R4733 1000/RE
C4738 4700P (HU)
R4734 1M/J6
R4735 12K/RE
IC4704 NJM4580ED-T1
C4735 0.01/UBN
C4736 0.01/UBN
R4739 1000/J6
VR4701 10K/VR2
R4738 4700/J6
R OUT LEVEL
C4740 16V10/EVN
R4741 10K/J6
TP4703 VJR0646
(15) R_DEMP
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

Ref No4000 Series (4701-4750)

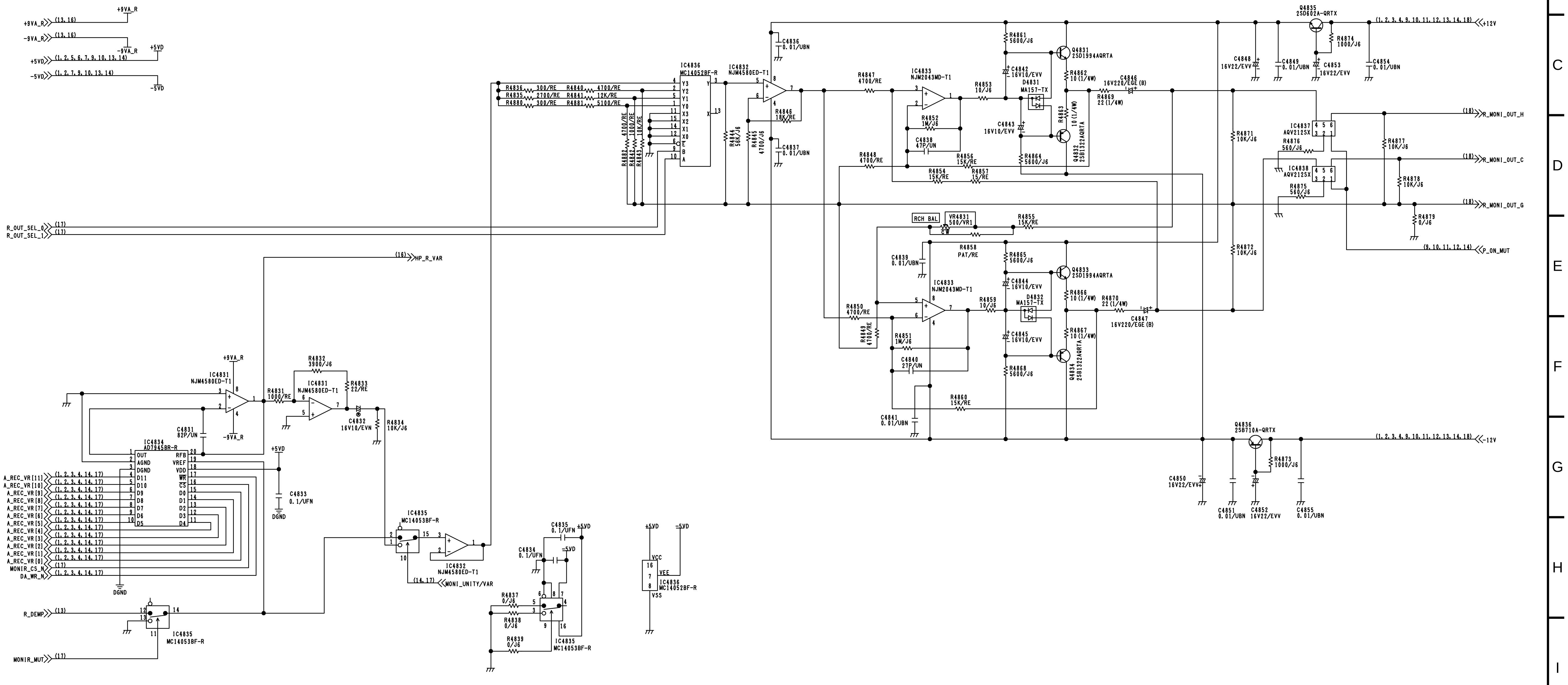
COMPONENT NAME	A ADDA (MONI LR DA)	13/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM168	



+9VA_L (13)
+9VA_L
-9VA_L (13)
-9VA_L
+5VD (1, 2, 5, 6, 7, 9, 10, 13, 15)
+5VD
-5VD (1, 2, 7, 9, 10, 13, 15)
-5VD
P_MUT_L (17)
R4752 33K/J6
R4751 100K/J6
C4751 0.1/UFN
C4753 PAT/EVV
QR4752 UN2213-TX
R4756 2200/J6
R4762 47K/J6
Q4753 2SB710A-QRTX
R4763 100K/J6
(17, 18) +5V
(9, 10, 11, 12, 15) P_ON_MUT
DGND
R4764 0/J6
R4753 10K/J6
QR4751 UN2213-TX
R4757 47K/J6
R4758 47K/J6
Q4754 2SB710A-QRTX
MUTE_H (17)
(16) HP_MUT
C4755 16V47/EVV
D4753 MA152WK-TX
MA157-TX D4751
C4754 16V47/EVV
R4759 1M/J6
R4760 100K/J6
Q4752 2SB710A-QRTX
R4754 47K/J6
R4755 10K/J6
C4752 16V22/EVV
Q4751 2SB710A-QRTX
D4752 MA152WK-TX
IC4756 MC14052BF-R
Y3 Y2 Y1 Y0 X3 X2 X1 X0 E B A Y X
R4769 300/RE
R4771 4700/RE
R4770 2700/RE
R4772 12K/RE
R4814 300/RE
R4815 5100/RE
R4816 4700/RE
R4773 1000/RE
R4774 10K/RE
R4778 56K/J6
IC4752 NJM4580ED-T1
R4779 18K/RE
R4780 4700/J6
C4761 0.01/UBN
C4762 0.01/UBN
R4781 4700/RE
IC4753 NJM2043MD-T1
R4787 1M/J6
C4764 47P/UN
R4786 10/J6
R4782 4700/RE
R4788 15K/RE
R4790 15K/RE
R4791 15/RE
R4795 5600/J6
C4767 16V10/EVV
D4754 MA157-TX
C4768 16V10/EVV
R4798 5600/J6
Q4755 2SD1994AQRTA
R4796 10 (1/4W)
R4797 10 (1/4W)
Q4756 2SB1322AQRTA
R4803 22 (1/4W)
C4771 16V220/EGE (B)
Q4759 2SD602A-QRTX
R4808 1000/J6
C4773 16V22/EVV
C4774 0.01/UBN
C4775 16V22/EVV
C4779 0.01/UBN
(1, 2, 3, 4, 9, 10, 11, 12, 13, 15, 18) +12V
R4805 10K/J6
IC4757 AQV212SX
R4810 560/J6
IC4758 AQV212SX
R4809 560/J6
R4811 10K/J6
R4812 10K/J6
R4813 0/J6
(18) L_MONI_OUT_H
(18) L_MONI_OUT_C
(18) L_MONI_OUT_G
L_OUT_SEL_0 (17)
L_OUT_SEL_1 (17)
LCH BAL
VR4751 500/VR1
CW
R4789 15K/RE
R4792 PAT/RE
C4765 0.01/UBN
IC4753 NJM2043MD-T1
R4784 4700/RE
R4783 4700/RE
R4785 1M/J6
C4763 27P/UN
R4793 10/J6
R4799 5600/J6
C4769 16V10/EVV
D4755 MA157-TX
C4770 16V10/EVV
R4802 5600/J6
Q4757 2SD1994AQRTA
R4800 10 (1/4W)
R4801 10 (1/4W)
Q4758 2SB1322AQRTA
R4804 22 (1/4W)
C4772 16V220/EGE (B)
R4806 10K/J6
R4794 15K/RE
C4766 0.01/UBN
Q4760 2SB710A-QRTX
R4807 1000/J6
(1, 2, 3, 4, 9, 10, 11, 12, 13, 15, 18) -12V
C4776 16V22/EVV
C4777 0.01/UBN
C4778 16V22/EVV
C4780 0.01/UBN
(16) HP_L_VAR
IC4751 NJM4580ED-T1
+9VA_L
-9VA_L
C4756 82P/UN
R4765 1000/RE
R4766 3900/J6
R4767 22/RE
C4758 16V10/EVN
R4768 10K/J6
IC4754 AD7945BR-R
OUT1 AGND DGND DB11 DB10 DB9 DB8 DB7 DB6 DB5
RFB VREF VDD WR CS DB0 DB1 DB2 DB3 DB4
+5VD
C4757 0.1/UFN
A_REC_VR[11] (1, 2, 3, 4, 15, 17)
A_REC_VR[10] (1, 2, 3, 4, 15, 17)
A_REC_VR[9] (1, 2, 3, 4, 15, 17)
A_REC_VR[8] (1, 2, 3, 4, 15, 17)
A_REC_VR[7] (1, 2, 3, 4, 15, 17)
A_REC_VR[6] (1, 2, 3, 4, 15, 17)
A_REC_VR[5] (1, 2, 3, 4, 15, 17)
A_REC_VR[4] (1, 2, 3, 4, 15, 17)
A_REC_VR[3] (1, 2, 3, 4, 15, 17)
A_REC_VR[2] (1, 2, 3, 4, 15, 17)
A_REC_VR[1] (1, 2, 3, 4, 15, 17)
A_REC_VR[0] (1, 2, 3, 4, 15, 17)
MONIL_CS_N (17)
DA_WR_N (1, 2, 3, 4, 15, 17)
IC4755 MC14053BF-R
IC4752 NJM4580ED-T1
(15, 17) MONI_UNITY/VAR
L_DEMP (13)
MONIL_MUT (17)
R4761 10K/J6
C4760 0.1/UFN
C4759 0.1/UFN
+5VD
-5VD
R4775 0/J6
R4776 0/J6
R4777 0/J6
IC4755 MC14053BF-R
VCC VEE VSS
IC4756 MC14052BF-R
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

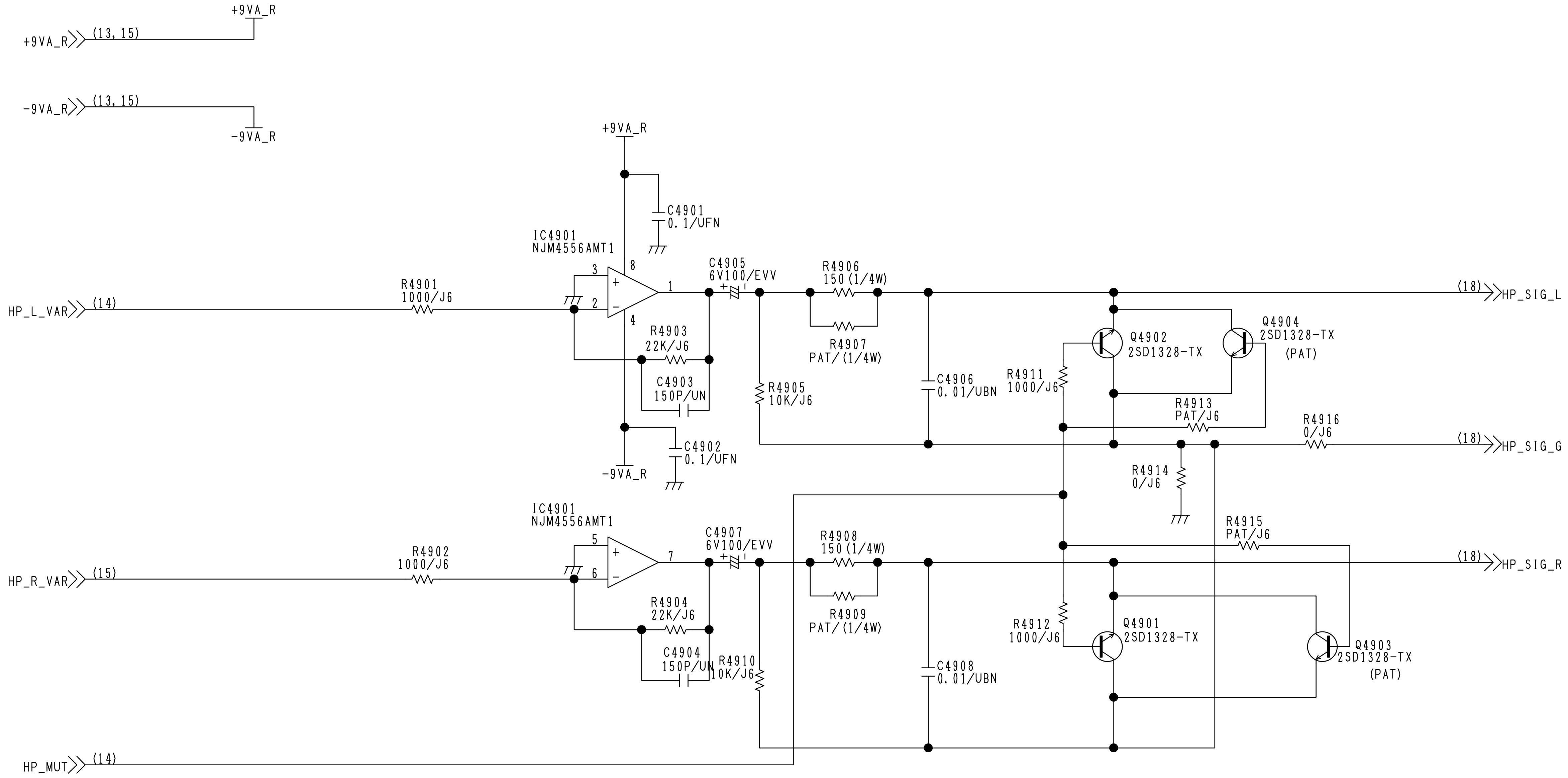
Ref No4000 Series (4751-4830)

COMPONENT NAME	A ADDA (MONI L OUTPUT)	14/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM169	


+9VA_R (13, 16)
-9VA_R (13, 16)
+5VD (1, 2, 5, 6, 7, 9, 10, 13, 14)
-5VD (1, 2, 7, 9, 10, 13, 14)
R_OUT_SEL_0 (17)
R_OUT_SEL_1 (17)
(16) HP_R_VAR
R4836 300/RE
R4835 2700/RE
R4880 300/RE
R4840 4700/RE
R4841 12K/RE
R4881 5100/RE
R4882 4700/RE
R4842 1000/RE
R4843 10K/RE
IC4836 MC14052BF-R
Y3 Y2 Y1 Y0 X3 X2 X1 X0 E B A Y X
IC4832 NJM4580ED-T1
R4844 56K/J6
R4845 4700/J6
R4846 18K/RE
C4836 0.01/UBN
C4837 0.01/UBN
R4847 4700/RE
R4848 4700/RE
IC4833 NJM2043MD-T1
R4852 1M/J6
C4838 47P/UN
R4853 10/J6
R4854 15K/RE
R4856 15K/RE
R4857 15/RE
R4861 5600/J6
C4842 16V10/EVV
C4843 16V10/EVV
D4831 MA157-TX
Q4831 2SD1994AQRTA
R4862 10 (1/4W)
R4863 10 (1/4W)
Q4832 2SB1322AQRTA
R4864 5600/J6
R4869 22 (1/4W)
C4846 16V220/EGE (B)
Q4835 2SD602A-QRTX
R4874 1000/J6
C4848 16V22/EVV
C4849 0.01/UBN
C4853 16V22/EVV
C4854 0.01/UBN
(1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 18) +12V
IC4837 AQV212SX
IC4838 AQV212SX
R4876 560/J6
R4875 560/J6
R4871 10K/J6
R4872 10K/J6
R4877 10K/J6
R4878 10K/J6
R4879 0/J6
(18) R_MONI_OUT_H
(18) R_MONI_OUT_C
(18) R_MONI_OUT_G
(9, 10, 11, 12, 14) P_ON_MUT
RCH BAL
VR4831 500/VR1
CW
R4855 15K/RE
R4858 PAT/RE
C4839 0.01/UBN
IC4833 NJM2043MD-T1
R4850 4700/RE
R4849 4700/RE
R4851 1M/J6
C4840 27P/UN
C4841 0.01/UBN
R4859 10/J6
R4860 15K/RE
R4865 5600/J6
C4844 16V10/EVV
C4845 16V10/EVV
D4832 MA157-TX
Q4833 2SD1994AQRTA
R4866 10 (1/4W)
R4867 10 (1/4W)
Q4834 2SB1322AQRTA
R4868 5600/J6
R4870 22 (1/4W)
C4847 16V220/EGE (B)
Q4836 2SB710A-QRTX
R4873 1000/J6
C4850 16V22/EVV
C4851 0.01/UBN
C4852 16V22/EVV
C4855 0.01/UBN
(1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 18) -12V
+9VA_R
-9VA_R
IC4831 NJM4580ED-T1
C4831 82P/UN
R4831 1000/RE
R4832 3900/J6
R4833 22/RE
C4832 16V10/EVN
R4834 10K/J6
IC4834 AD7945BR-R
OUT AGND DGND D11 D10 D9 D8 D7 D6 D5
RFB VREF VDD WR CS D0 D1 D2 D3 D4
+5VD
C4833 0.1/UFN
DGND
A_REC_VR[11] (1, 2, 3, 4, 14, 17)
A_REC_VR[10] (1, 2, 3, 4, 14, 17)
A_REC_VR[9] (1, 2, 3, 4, 14, 17)
A_REC_VR[8] (1, 2, 3, 4, 14, 17)
A_REC_VR[7] (1, 2, 3, 4, 14, 17)
A_REC_VR[6] (1, 2, 3, 4, 14, 17)
A_REC_VR[5] (1, 2, 3, 4, 14, 17)
A_REC_VR[4] (1, 2, 3, 4, 14, 17)
A_REC_VR[3] (1, 2, 3, 4, 14, 17)
A_REC_VR[2] (1, 2, 3, 4, 14, 17)
A_REC_VR[1] (1, 2, 3, 4, 14, 17)
A_REC_VR[0] (1, 2, 3, 4, 14, 17)
MONIR_CS_N (17)
DA_WR_N (1, 2, 3, 4, 14, 17)
IC4835 MC14053BF-R
IC4832 NJM4580ED-T1
(14, 17) MONI_UNITY/VAR
R_DEMP (13)
MONIR_MUT (17)
IC4835 MC14053BF-R
C4835 0.1/UFN
C4834 0.1/UFN
R4837 0/J6
R4838 0/J6
R4839 0/J6
IC4835 MC14053BF-R
+5VD
-5VD
VCC VEE VSS
IC4836 MC14052BF-R

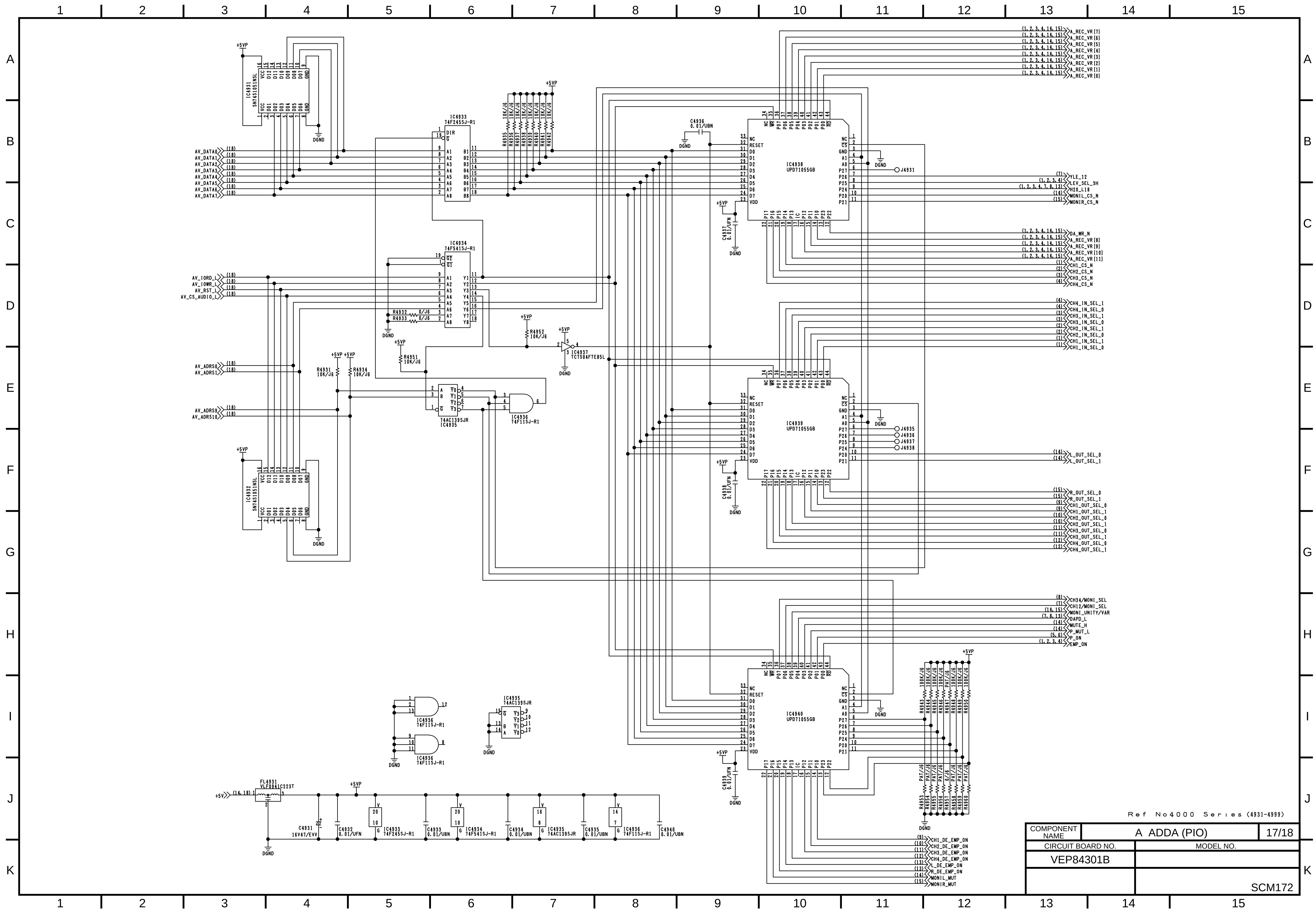
Ref No4000 Series (4831-4900)

COMPONENT NAME	A ADDA (MONI R OUTPUT)	15/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM170	


+9VA_R
+9VA_R
(13,15)
-9VA_R
(13,15)
-9VA_R
+9VA_R
C4901
0.1/UFN
IC4901
NJM4556AMT1
3
8
2
4
1
+
-
HP_L_VAR
(14)
R4901
1000/J6
C4905
6V100/EVV
R4906
150(1/4W)
R4907
PAT/(1/4W)
R4903
22K/J6
C4903
150P/UN
R4905
10K/J6
C4906
0.01/UBN
(18)
HP_SIG_L
Q4902
2SD1328-TX
Q4904
2SD1328-TX
(PAT)
R4911
1000/J6
R4913
PAT/J6
R4916
0/J6
(18)
HP_SIG_G
C4902
0.1/UFN
-9VA_R
R4914
0/J6
IC4901
NJM4556AMT1
5
6
7
HP_R_VAR
(15)
R4902
1000/J6
C4907
6V100/EVV
R4908
150(1/4W)
R4909
PAT/(1/4W)
R4915
PAT/J6
(18)
HP_SIG_R
R4904
22K/J6
C4904
150P/UN
R4910
10K/J6
C4908
0.01/UBN
R4912
1000/J6
Q4901
2SD1328-TX
Q4903
2SD1328-TX
(PAT)
HP_MUT
(14)

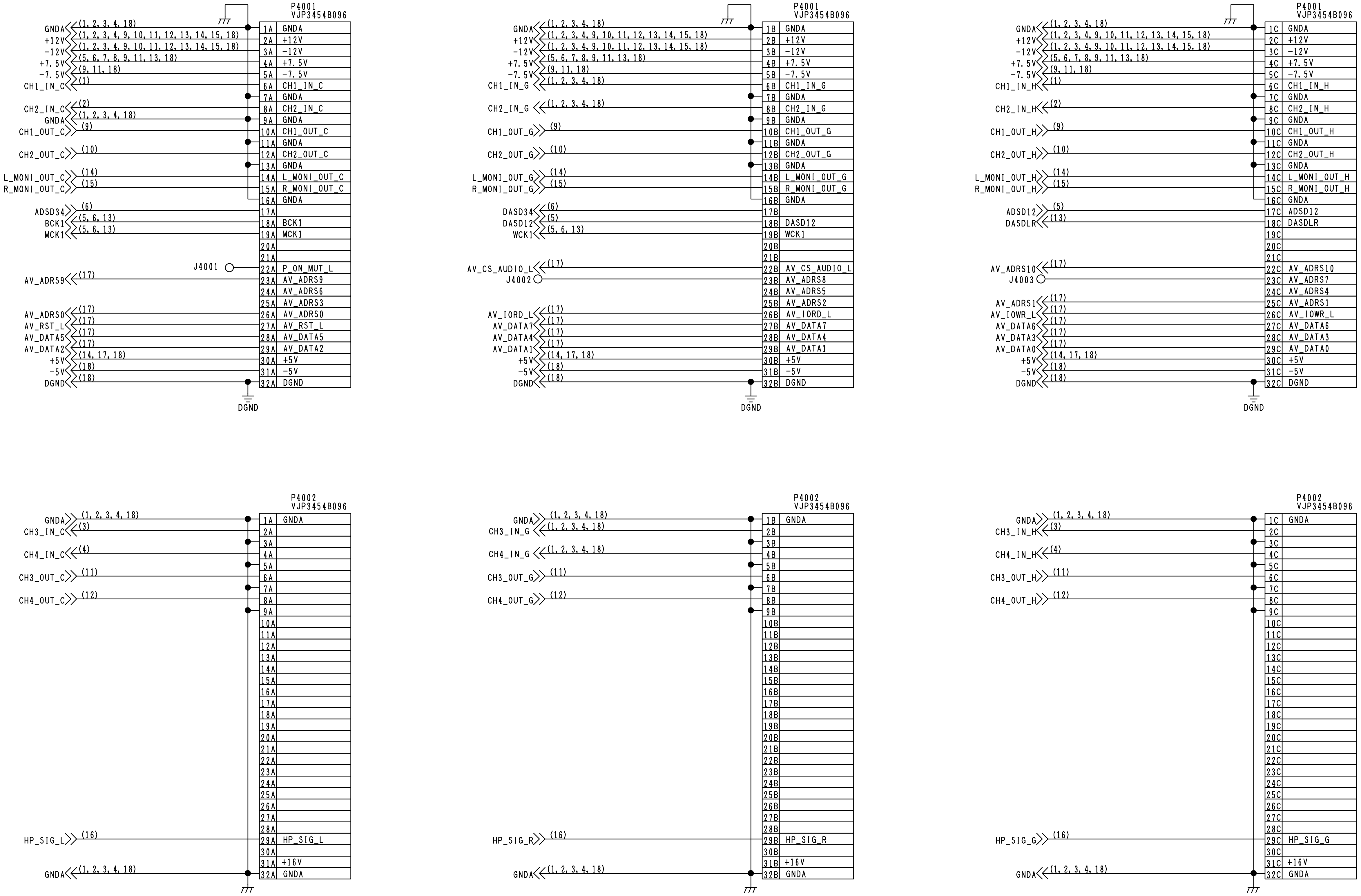
Ref No4000 Series (4901-4930)

COMPONENT NAME	A ADDA (HP OUTPUT)	16/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
		SCM171


IC4931
SN74S1051NSL
IC4932
SN74S1051NSL
IC4933
74F245SJ-R1
IC4934
74F541SJ-R1
IC4935
74AC139SJR
IC4936
74F11SJ-R1
IC4937
TC7S04FTE85L
IC4938
UPD71055GB
IC4939
UPD71055GB
IC4940
UPD71055GB
R4935 R4936 R4937 R4938 R4939 R4940 R4941 R4942
10K/J6
R4932 0/J6
R4933 0/J6
R4931 10K/J6
R4934 10K/J6
R4951 10K/J6
R4952 10K/J6
C4936 0.01/UBN
C4937 0.01/UFN
C4938 0.01/UFN
C4939 0.01/UFN
+5VP
DGND
AV_DATA0 (18)
AV_DATA1 (18)
AV_DATA2 (18)
AV_DATA3 (18)
AV_DATA4 (18)
AV_DATA5 (18)
AV_DATA6 (18)
AV_DATA7 (18)
AV_IORD_L (18)
AV_IOWR_L (18)
AV_RST_L (18)
AV_CS_AUDIO_L (18)
AV_ADRS0 (18)
AV_ADRS1 (18)
AV_ADRS9 (18)
AV_ADRS10 (18)
J4931
J4935
J4936
J4937
J4938
(1, 2, 3, 4, 14, 15) A_REC_VR[7]
(1, 2, 3, 4, 14, 15) A_REC_VR[6]
(1, 2, 3, 4, 14, 15) A_REC_VR[5]
(1, 2, 3, 4, 14, 15) A_REC_VR[4]
(1, 2, 3, 4, 14, 15) A_REC_VR[3]
(1, 2, 3, 4, 14, 15) A_REC_VR[2]
(1, 2, 3, 4, 14, 15) A_REC_VR[1]
(1, 2, 3, 4, 14, 15) A_REC_VR[0]
(7) YLE_12
(1, 2, 3, 4) LEV_SEL_3H
(1, 2, 3, 4, 7, 8, 13) H20_L18
(14) MONIL_CS_N
(15) MONIR_CS_N
(1, 2, 3, 4, 14, 15) DA_WR_N
(1, 2, 3, 4, 14, 15) A_REC_VR[8]
(1, 2, 3, 4, 14, 15) A_REC_VR[9]
(1, 2, 3, 4, 14, 15) A_REC_VR[10]
(1, 2, 3, 4, 14, 15) A_REC_VR[11]
(1) CH1_CS_N
(2) CH2_CS_N
(3) CH3_CS_N
(4) CH4_CS_N
(4) CH4_IN_SEL_1
(4) CH4_IN_SEL_0
(3) CH3_IN_SEL_1
(3) CH3_IN_SEL_0
(2) CH2_IN_SEL_1
(2) CH2_IN_SEL_0
(1) CH1_IN_SEL_1
(1) CH1_IN_SEL_0
(14) L_OUT_SEL_0
(14) L_OUT_SEL_1
(15) R_OUT_SEL_0
(15) R_OUT_SEL_1
(9) CH1_OUT_SEL_0
(9) CH1_OUT_SEL_1
(10) CH2_OUT_SEL_0
(10) CH2_OUT_SEL_1
(11) CH3_OUT_SEL_0
(11) CH3_OUT_SEL_1
(12) CH4_OUT_SEL_0
(12) CH4_OUT_SEL_1
(8) CH34/MONI_SEL
(7) CH12/MONI_SEL
(14, 15) MONI_UNITY/VAR
(7, 8, 13) DAPD_L
(14) MUTE_H
(14) P_MUT_L
(5, 6) P_ON
(1, 2, 3, 4) EMP_ON
R4943 R4944 R4945 R4946 R4948 R4949 R4950 100K/J6
R4947 PAT/J6
R4953 R4954 R4955 R4956 R4958 R4959 R4960 PAT/J6
R4957 0/J6
(9) CH1_DE_EMP_ON
(10) CH2_DE_EMP_ON
(11) CH3_DE_EMP_ON
(12) CH4_DE_EMP_ON
(13) L_DE_EMP_ON
(13) R_DE_EMP_ON
(14) MONIL_MUT
(15) MONIR_MUT
+5V (14, 18)
FL4931
VLF0941C223T
C4931 16V47/EVV
C4932 0.01/UFN
C4933 0.01/UBN
C4934 0.01/UBN
C4935 0.01/UBN
C4940 0.01/UBN

Ref No4000 Series (4931-4999)

COMPONENT NAME	A ADDA (PIO)	17/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM172	


P4001
VJP3454B096
GNDA (1, 2, 3, 4, 18) 1A GNDA
+12V (1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18) 2A +12V
-12V (1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18) 3A -12V
+7.5V (5, 6, 7, 8, 9, 11, 13, 18) 4A +7.5V
-7.5V (9, 11, 18) 5A -7.5V
CH1_IN_C (1) 6A CH1_IN_C
7A GNDA
CH2_IN_C (2) 8A CH2_IN_C
GNDA (1, 2, 3, 4, 18) 9A GNDA
CH1_OUT_C (9) 10A CH1_OUT_C
11A GNDA
CH2_OUT_C (10) 12A CH2_OUT_C
13A GNDA
L_MONI_OUT_C (14) 14A L_MONI_OUT_C
R_MONI_OUT_C (15) 15A R_MONI_OUT_C
16A GNDA
ADSD34 (6) 17A
BCK1 (5, 6, 13) 18A BCK1
MCK1 (5, 6, 13) 19A MCK1
20A
21A
J4001 22A P_ON_MUT_L
AV_ADRS9 (17) 23A AV_ADRS9
24A AV_ADRS6
25A AV_ADRS3
AV_ADRS0 (17) 26A AV_ADRS0
AV_RST_L (17) 27A AV_RST_L
AV_DATA5 (17) 28A AV_DATA5
AV_DATA2 (17) 29A AV_DATA2
+5V (14, 17, 18) 30A +5V
-5V (18) 31A -5V
DGND (18) 32A DGND
DGND
P4001
VJP3454B096
GNDA (1, 2, 3, 4, 18) 1B GNDA
+12V (1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18) 2B +12V
-12V (1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18) 3B -12V
+7.5V (5, 6, 7, 8, 9, 11, 13, 18) 4B +7.5V
-7.5V (9, 11, 18) 5B -7.5V
CH1_IN_G (1, 2, 3, 4, 18) 6B CH1_IN_G
7B GNDA
CH2_IN_G (1, 2, 3, 4, 18) 8B CH2_IN_G
9B GNDA
CH1_OUT_G (9) 10B CH1_OUT_G
11B GNDA
CH2_OUT_G (10) 12B CH2_OUT_G
13B GNDA
L_MONI_OUT_G (14) 14B L_MONI_OUT_G
R_MONI_OUT_G (15) 15B R_MONI_OUT_G
16B GNDA
DASD34 (6) 17B
DASD12 (5) 18B DASD12
WCK1 (5, 6, 13) 19B WCK1
20B
21B
AV_CS_AUDIO_L (17) 22B AV_CS_AUDIO_L
J4002 23B AV_ADRS8
24B AV_ADRS5
25B AV_ADRS2
AV_IORD_L (17) 26B AV_IORD_L
AV_DATA7 (17) 27B AV_DATA7
AV_DATA4 (17) 28B AV_DATA4
AV_DATA1 (17) 29B AV_DATA1
+5V (14, 17, 18) 30B +5V
-5V (18) 31B -5V
DGND (18) 32B DGND
DGND
P4001
VJP3454B096
GNDA (1, 2, 3, 4, 18) 1C GNDA
+12V (1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18) 2C +12V
-12V (1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 18) 3C -12V
+7.5V (5, 6, 7, 8, 9, 11, 13, 18) 4C +7.5V
-7.5V (9, 11, 18) 5C -7.5V
CH1_IN_H (1) 6C CH1_IN_H
7C GNDA
CH2_IN_H (2) 8C CH2_IN_H
9C GNDA
CH1_OUT_H (9) 10C CH1_OUT_H
11C GNDA
CH2_OUT_H (10) 12C CH2_OUT_H
13C GNDA
L_MONI_OUT_H (14) 14C L_MONI_OUT_H
R_MONI_OUT_H (15) 15C R_MONI_OUT_H
16C GNDA
ADSD12 (5) 17C ADSD12
DASDLR (13) 18C DASDLR
19C
20C
21C
AV_ADRS10 (17) 22C AV_ADRS10
J4003 23C AV_ADRS7
24C AV_ADRS4
AV_ADRS1 (17) 25C AV_ADRS1
AV_IOWR_L (17) 26C AV_IOWR_L
AV_DATA6 (17) 27C AV_DATA6
AV_DATA3 (17) 28C AV_DATA3
AV_DATA0 (17) 29C AV_DATA0
+5V (14, 17, 18) 30C +5V
-5V (18) 31C -5V
DGND (18) 32C DGND
DGND
P4002
VJP3454B096
GNDA (1, 2, 3, 4, 18) 1A GNDA
CH3_IN_C (3) 2A
3A
CH4_IN_C (4) 4A
5A
CH3_OUT_C (11) 6A
7A
CH4_OUT_C (12) 8A
9A
10A
11A
12A
13A
14A
15A
16A
17A
18A
19A
20A
21A
22A
23A
24A
25A
26A
27A
28A
HP_SIG_L (16) 29A HP_SIG_L
30A
31A +16V
GNDA (1, 2, 3, 4, 18) 32A GNDA
P4002
VJP3454B096
GNDA (1, 2, 3, 4, 18) 1B GNDA
CH3_IN_G (1, 2, 3, 4, 18) 2B
3B
CH4_IN_G (1, 2, 3, 4, 18) 4B
5B
CH3_OUT_G (11) 6B
7B
CH4_OUT_G (12) 8B
9B
10B
11B
12B
13B
14B
15B
16B
17B
18B
19B
20B
21B
22B
23B
24B
25B
26B
27B
28B
HP_SIG_R (16) 29B HP_SIG_R
30B
31B +16V
GNDA (1, 2, 3, 4, 18) 32B GNDA
P4002
VJP3454B096
GNDA (1, 2, 3, 4, 18) 1C GNDA
CH3_IN_H (3) 2C
3C
CH4_IN_H (4) 4C
5C
CH3_OUT_H (11) 6C
7C
CH4_OUT_H (12) 8C
9C
10C
11C
12C
13C
14C
15C
16C
17C
18C
19C
20C
21C
22C
23C
24C
25C
26C
27C
28C
HP_SIG_G (16) 29C HP_SIG_G
30C
31C +16V
GNDA (1, 2, 3, 4, 18) 32C GNDA

Ref No4000 Series

COMPONENT NAME	A ADDA (CONNECTOR)	18/18
CIRCUIT BOARD NO.	MODEL NO.	
VEP84301B		
	SCM173	

Panasonic

DVCPRO

ENGLISH

DEUTSCH

FRANÇAIS

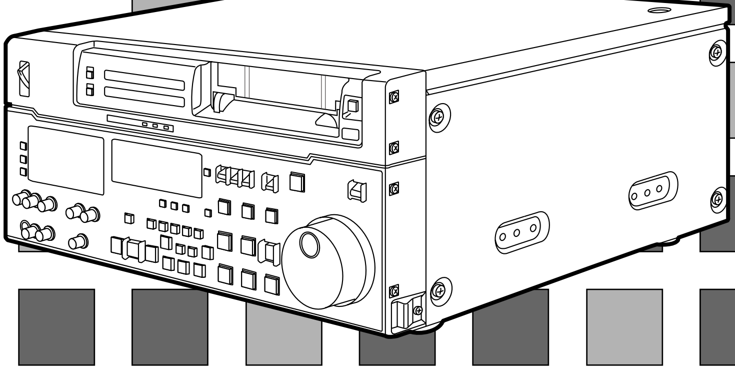
ITALIANO

ESPAÑOL

Digital Video Cassette Recorder

AJ-D850E

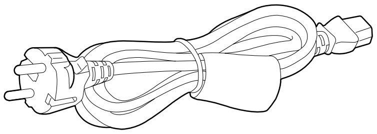
Operating Instructions



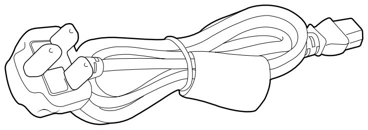
Caution for AC Mains Lead

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY.
This product is equipped with 2 types of AC mains cable. One is for continental Europe, etc. and the other one is only for U.K.
Appropriate mains cable must be used in each local area, since the other type of mains cable is not suitable.

FOR CONTINENTAL EUROPE, ETC.
Not to be used in the U.K.



FOR U.K. ONLY
If the plug supplied is not suitable for your socket outlet, it should be cut off and appropriate one fitted.



FOR U.K. ONLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 13 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 13 amps and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.
WARNING: THIS APPLIANCE MUST BE EARTHED.
IMPORTANT: The wires in this mains lead are coloured in accordance with the following code:

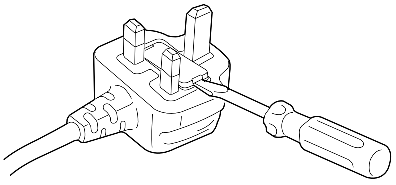
Green-and-Yellow: Earth
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

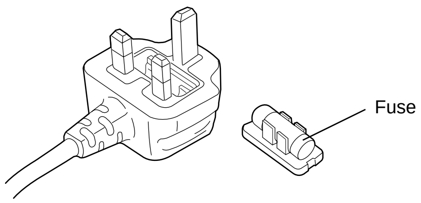
- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.
- The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.
- The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse

1. Open the fuse compartment with a screwdriver.



2. Replace the fuse.



IMPORTANT

"Unauthorized recording of copyrighted television programmes, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."

- **THIS APPARATUS MUST BE EARTHED**
  To ensure safe operation the three-pin plug must be inserted only into a standard three-pin power point which is effectively earthed through the normal house-hold wiring.
  Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.
  The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

- **DO NOT REMOVE PANEL COVER BY UNSCREWING**
  To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. And do not insert fingers or any other objects into the video cassette holder.

CAUTION:
Do not install or place this unit in a bookcase, built in cabinet or in another confined space in order to keep well ventilated condition. Ensure that curtains and any other materials do not obstruct the ventilation condition to prevent risk of electric shock or fire hazard due to overheating.

WARNING:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION:
TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSOIRES ONLY.

CAUTION:
To reduce the risk of fire or shock hazard, refer change of switch setting inside the unit to qualified service personnel.

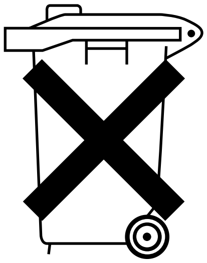
Operating precaution
Operation near any appliance which generates strong magnetic fields may give rise to noise in the video and audio singals. If this should be the case, deal with the situation by, for instance, moving the source of the magnetic fields away from the unit before operation.

☐ is the safety information.

Attention/Attentie

- This apparatus contains a lithium battery for memory back-up.
- For the removal of the battery at the moment of the disposal at the end of the service life please consult your dealer.
- Do not throw away the battery. Instead, hand it in as hazardous waste.

- Dit apparaat bevat een lithiumbatterij voor memory back-up.
- Raadpleeg uw leverancier over de verwijdering van de batterij op het moment dat u het apparaat bij einde levensduur afdankt.
- Gooi de batterij niet weg, maar lever hem in als KCA.



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Before operating this unit, check that all of its accessories are present and accounted for.

Power cord....1 pc

Option

- AJ-YA750P Component serial interface board
- AJ-CS750P Cassette adaptor
- AJ-MA75P Rack mounting adaptor
- AJ-YA752 Audio memory unit
- AJ-YAC850P SDTI/SDI board

General and Features

This unit is a digital video cassette recorder which uses 1/4-inch tapes.
It incorporates digital compression technology so that the deterioration in picture quality and sound quality resulting from dubbing is significantly minimized compared with existing analogue systems.
Furthermore, since it has a compact 4U size and light weight, the unit can be carried around or mounted in a 19-inch rack with ease.
The settings for the unit's setup can be performed interactively while viewing the screen menus on the TV monitor, and editing functions include both assemble and insert editing.

Features

Compact size and light weight

This is a 4U size digital VTR. It can be mounted in a 19-inch rack with ease using the optional rack-mounting adaptors (AJ-MA75P).

Up to 184 minutes of recording

Two sizes of cassette tapes can be used with this unit: M cassette (max. 66 minutes) and L cassette (max. 184 minutes). The width of the tapes measures 1/4 inch to achieve a compact design.

Compatibility with consumer products

Consumer cassette tapes shot with digital cameras available on the consumer market can be played back on this unit using the optional cassette adaptor (AJ-CS750P).

<Notes>

- Slow motion playback is not possible with consumer cassette tapes.
- Consumer cassette tapes recorded in LP mode cannot be played back.

Digital slow motion/dial jog

The slow-motion playback images can be reproduced clearly at any of the speeds given below using commands from the external controller or other such device: –0.43/–0.3/–0.2/–0.1/–0.03/0/+0.03/+0.1/+0.2/+0.3/+0.5/+0.75.

<Note>

Some noise may occur when the slow motion speed is changed.

Digital audio output in slow-motion/jog mode

This enables smooth playback of sound even in the slow-motion or jog mode, making it easier to use sound to search for edit points and determine their positions.

Dial shuttle

Shuttle operations enable the tape to be played back with colour images at a speed of up to 60 times normal tape speed in either the forward or reverse direction.

Internal audio memory with 20-second capacity

Sound can now be recorded as pictures are played back without any time lag between the sound and picture (a process known as "voice-over"). Audio cross channel editing is enabled by using the unit in combination with an external sound mixer.

Audio memory unit (AJ-YA752) supported

Voice-over extending up to 34 minutes and 30 seconds (5 min. 46 sec. standard) is enabled by connecting the AJ-YA752 unit (optional accessory).

Features

(continued)

Recording and playing back V blanking data

In addition to closed caption and VITC, up to 28 lines of the character data per frame in the V blanking period can be recorded and played back.

Time codes

This unit comes with a built-in time code generator (TCG)/time code reader (TCR). In addition to the internal time code, an external code input or input signal VITC can be recorded in the machine as the LTC time code.

Multi-function input/output interfaces

- **Analogue input/output**
  Component (Y, P_B, P_R) and composite signal input and output connectors are provided.
- **Serial digital input/output**
  Digital component interfacing complying with the EBU Tech. 3267-E serial digital signal standard is possible when the optional component serial interface board (AJ-YA750P) is used. Transfer using SDTI is enabled by the AJ-YAC850P SDTI/SDI board (option). (SMPTE 305M)
- **AES/EBU audio input/output**
  Digital audio input and output connectors are provided.
- **9-pin (RS-422A)/(RS-232C) remote**
  In addition to the standard 9-pin serial (RS-422A) connector, RS-232C and 25-pin parallel connectors are also featured.
  The RS-422A connector enables another VTR to be operated in parallel with the unit if a looping connection is used for the two units.

2-channel high-sound-quality digital audio

Sound can be edited separately for two channels while channel mixing capabilities are also available. One channel is provided for the analogue cue track.

Automatic editing functions

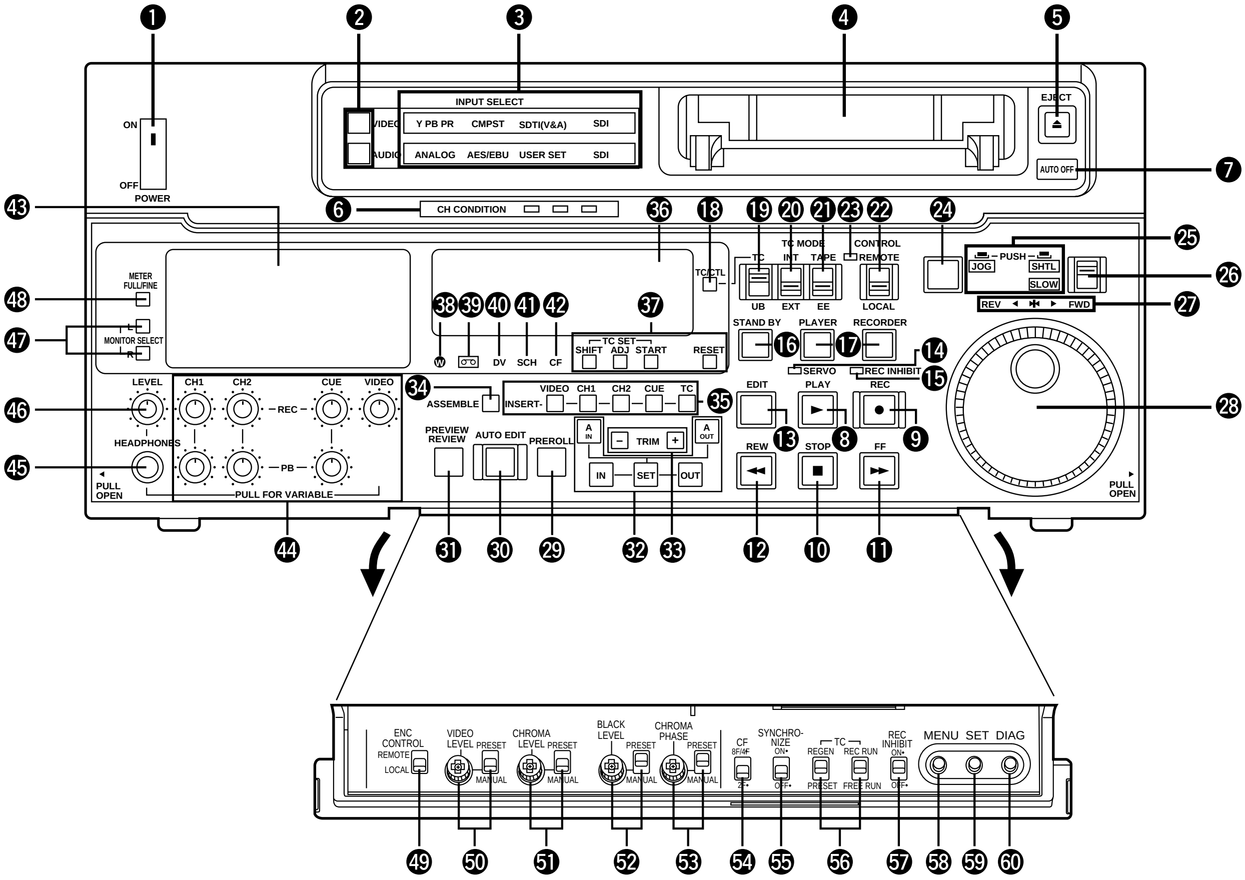
Assembly and insert editing can be performed.

Menu-driven setup

The setup settings, which are conducted prior to operating the unit, are performed while viewing the setup menus either on the unit’s display or a TV monitor.

Controls and their functions

Front panel


①
②
③
④
⑤
⑦
⑥
CH CONDITION
ON
OFF
POWER
INPUT SELECT
VIDEO
AUDIO
Y PB PR
CMPST
SDTI(V&A)
SDI
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
㊸
㊱
⑱
⑲
⑳
㉑
㉓
㉒
㉔
㉕
㉖
㉗
TC MODE
CONTROL
TC
INT
TAPE
REMOTE
UB
EXT
EE
LOCAL
TC/CTL
PUSH
JOG
SHTL
SLOW
REV
FWD
METER FULL/FINE
㊽
㊼
MONITOR SELECT
L
R
㊳
㊴
㊵
㊶
㊷
㊲
DV
SCH
CF
TC SET
SHIFT
ADJ
START
RESET
STAND BY
PLAYER
RECORDER
⑯
⑰
⑭
SERVO
REC INHIBIT
⑮
㊻
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
㊺
PULL OPEN
PULL FOR VARIABLE
㉞
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
㉟
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
⑬
⑧
⑨
REW
STOP
FF
㉘
PULL OPEN
㊹
㉛
㉚
㉙
㉜
㉝
⑫
⑩
⑪
ENC CONTROL
REMOTE
LOCAL
VIDEO LEVEL
PRESET
MANUAL
CHROMA LEVEL
PRESET
MANUAL
BLACK LEVEL
PRESET
MANUAL
CHROMA PHASE
PRESET
MANUAL
CF
8F/4F
2F
SYNCHRO-NIZE
ON
OFF
TC
REGEN
PRESET
REC RUN
FREE RUN
REC INHIBIT
ON
OFF
MENU
SET
DIAG
㊾
㊿
(51)
(52)
(53)
(54)
(55)
(56)
(57)
(58)
(59)
(60)

<Front Panel Top Section>

① POWER switch

When the ON side is pressed, the power is switched on, and the audio level and video level meters, counter display and INPUT SELECT display light up.

② INPUT SELECT switches

These are used to select the video and audio input signals.

<Video>

Each time the VIDEO button is pressed, the input video signal selection is switched in the order of Y PB PR, COMPOSITE, SDTI (V&A), SDI and back to Y PB PR. If SDTI (V&A) is selected, both the video and audio signals will be input from SDTI.

<Audio>

Each time the AUDIO button is pressed, the input audio signal selection is switched in the order of ANALOG, AES/EBU, USER SET, SDI and back to ANALOG.

USER SET is a function for selecting two different input signals to be recorded on PCM audio signal CH1 and CH2, and it is used in tandem with the setup menu.

For instance, if USER SET is selected by INPUT SELECT and CH1=ANALOG, and CH2=DIGI are selected on the setup menu No. 710 (CH1 IN SEL), No. 711 (CH2 IN SEL) and No. 712 (DIGI IN SEL), the analogue input signal and AES/EBU digital signal will be respectively recorded on channels 1 and 2 of the PCM audio signals recorded on the tape.

However, when SDTI has been selected for the video input, SDTI input will be forcibly established for the audio input as well.

<Front Panel Top Section>

❸ **INPUT SELECT display**

The characters corresponding to the selected input signal light. When, with the exception of analogue signals, the selected input signals are not available, the display flashes to alert the user.

<Video>

Y PB PR: Analogue component video signal
CMPST: Analogue composite video signal
SDTI (V&A): Compressed data, serial and digital video and audio signals (option)
SDI: Serial digital video signal (EBU Tech. 3267-E) (option)

When BB has been selected as the setup menu No. 601 (INT BB SIG) setting, the entire display area will light up.

<Audio>

ANALOG: Analogue audio signal
AES/EBU: Digital audio signal
USER SET: Selection of audio signal to be recorded
SDI: Serial digital audio signal (EBU Tech. 3267-E) (option)

When ON has been selected as the setup menu No. 722 (INT SG) setting, the entire display area will light up.

❹ **Cassette insertion slot**

The M cassette, L cassette and consumer cassette (S cassette) with adaptor are inserted into this slot.
Consumer cassettes can be played back only.

❺ **EJECT button**

When this is pressed, the tape is unloaded and several seconds later the cassette is automatically ejected. When the counter display indicates “CTL”, the display is reset.
The lamp lights when the eject command is received.

❻ **Channel condition lamps**

One of these lamps lights in accordance with the error rate status. (Green→amber→red)

Green: This lights when the error rates for the video and audio playback signals are both acceptable.
Amber: This lights when the error rate for the video or audio playback signals has deteriorated.
Red: The playback picture will remain normal even when this lamp lights.
This lights when the video or audio signals are subject to rectification or interpolation.

❼ **AUTO OFF lamp**

This lights when trouble has arisen in the deck’s operation.

<Front Panel Centre Section>

❽ **PLAY button**

Playback commences when this button is pressed.
Recording commences when the button is pressed together with the REC button; manual editing commences when it is pressed together with the EDIT button during playback.
Pressing only the PLAY button during manual editing will cut out the editing and establish the playback mode.

❾ **REC button**

Recording commences when this button is pressed together with the PLAY button.
When it is pressed during playback, search, fast forward or rewind, EE mode images and audio signals can be monitored for as long as it is kept depressed.
When it is pressed in the stop mode, EE mode images and sound can be monitored. When the STOP button is pressed, the original picture and sound are restored.

❿ **STOP button**

When this is pressed, the tape stops travelling, and if the TAPE/EE selector switch is at TAPE, still pictures can be monitored.
The drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.
If the stop mode continues for more than a certain period of time, the unit automatically switches to the standby OFF mode in order to protect the tape.
The stop mode is established immediately after a cassette has been inserted into the unit.

⓫ **FF button***

The tape is fast forwarded when this is pressed.

⓬ **REW button***

The tape is rewound when this is pressed.

⓭ **EDIT button**

For manual editing, press both this button and the PLAY button together during playback.
When the button is pressed in the stop mode, the input mode signals selected by the ASSEMBLE or INSERT button can be monitored in the EE mode.
The original picture and sound are restored when the STOP button is pressed.
When the button is pressed during playback, search, fast forward or rewind, the input signals of the mode selected by the ASSEMBLE or INSERT button can be monitored in the EE mode for as long as the button is held down.

⓮ **SERVO lamp**

This lights when the drum servo and capstan servo have locked.

⓯ **REC INHIBIT lamp**

This lights when the REC INHIBIT switch in the front panel bottom section is at ON or when the accidental erasure prevention mode has been set for the cassette.
In this state, neither recording nor editing is possible.

* The FF/REW speed can be selected on the setup menu No. 102 (FF. REW MAX), and it is set to the same speed.

<Front Panel Centre Section>

⑯ **STAND BY button**

When this is pressed, the same tension as in the regular stop mode is applied to the tape, and while the head drum continues to rotate, the button's lamp lights to indicate that the standby ON mode is established.

In the standby OFF mode, the half-loading mode is established.

When this button is pressed in the stop mode, the standby OFF mode is established, the half-loading mode is established. The lamp in the button now goes off. When the unit remains in the stop mode for longer than a predetermined period, the standby OFF mode is automatically established in order to protect the tape.

When this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established.

When a button other than the STOP button is pressed, the mode corresponding to the button pressed is established.

On-screen settings are available for the transfer time to the standby OFF mode.

⑰ **PLAYER/RECORDER buttons**

These buttons are operated when editing operations are conducted using the unit as the recorder and a VTR equipped with an RS-422A serial interface remote control connector (9 pins). Neither button functions when the unit is used on its own.

PLAYER button: When this button is pressed, its lamp lights, and the player connected to the unit can be operated by remote control. The unit's editing and tape transport buttons now control the player's functions.

RECORDER button: When this button is pressed, its lamp lights, and the editing and tape transport buttons control the recorder's (= the unit's) functions.

⑱ **TC/CTL switch**

By pressing this switch, what appears on the counter display is changed between TC and CTL.

When TC is selected, either the TC or UB value is displayed depending on the position selected by the TC/UB switch.

⑲ **TC/UB switch**

This selector switch determines whether the value of TC or UB appears on the counter display when the TC/CTL switch has been set to TC.

⑳ **INT/EXT switch**

INT: For using the built-in time code generator.

EXT: For using the time external code which is input from the time code input connector or the video signal VITC. The selection is set at the setup menu No. 505 (EXT TC SEL).

㉑ **TAPE/EE switch**

<In the stop mode>

TAPE: For outputting the signals played back from the tape.

EE: For outputting the input signals selected by the INPUT SELECT switch.
Select NORMAL or THRU as the setup menu No. 116 (EE MODE SEL) setting. In either case, use the switch for monitoring purposes.

<In the editing*/recording mode>

TAPE: For outputting the simultaneous playback signals.

EE: For outputting the input signals selected by the INPUT SELECT switch.

* The SETUP menu No. 308 (CONFI EDIT) setting is required.

<Front Panel Centre Section>

㉒ REMOTE/LOCAL switch

This switch is set when the unit is to be controlled from an external source using the REMOTE connector, RS-232C connector or parallel connector.

REMOTE: Set to this position when controlling the unit by a device connected using the 9-pin REMOTE connector or RS-232C/parallel connector.

LOCAL: Set to this position when controlling the unit using the controls on its own operation panel.

㉓ REMOTE lamp

This lights when the REMOTE/LOCAL switch has been set to the REMOTE position.

㉔ Search button

This button is pressed to establish the search mode.

When the search dial is set to the shuttle mode and turned to a particular position, and this button is pressed, playback commences at the speed set by the search dial.

㉕ JOG/SHTL/SLOW lamps

These indicate the present status of the search dial and SHTL/SLOW switch.

JOG:	This lights when the unit is in the JOG mode.
SHTL:	This lights when the unit is in the SHTL mode.
SLOW:	This lights when the unit is in the VAR (variable) mode.

㉖ SHTL/SLOW switch

This selector switch is set when the search dial is used for SHTL or SLOW applications.

㉗ REV/STILL/FWD lamps

One of these lamps lights depending on the operation of the search dial.

REV: This lights when the dial is turned counterclockwise and the tape travels in the REV direction provided that the lamp in the search button has lit.

STILL: This lights in the JOG mode while the dial is kept stationary, and the tape stops travelling provided that the lamp in the search button has lit.
It lights in the SHTL mode provided that the dial is at the STILL position.

FWD: This lights when the dial is turned clockwise, and the tape travels in the FWD direction provided that the lamp in the search button has lit.

㉘ Search dial

This is used to search for the edit points.

Each time it is pressed, the mode is alternately set to shuttle or jog, and one of the JOG, SHTL and SLOW lamps lights. When the power has been turned on, the dial will not function until it has first returned to the STILL position.

Shuttle mode: When the dial is turned and stopped at a particular position while the SHTL/SLOW switch is at SHTL, the tape can be played back at the speed corresponding to the dial’s rotary angle position. A still picture appears at the dial’s centre position.
When the dial is turned all the way counterclockwise with the SHTL/SLOW switch at SLOW, the tape speed is set to –4× normal speed, when it is set to the centre position, a still picture is produced, and when it is turned all the way clockwise, the tape speed is set to +4× normal speed.
The maximum speed for SLOW can be set using setup menus No. 317 (VAR FWD MAX) and No. 318 (VAR REV MAX).

Jog mode: The dial clickstops are cleared, and the tape is played back at the speed corresponding to the speed at which the dial is turned. The maximum speed can be selected using the setup menu No. 320 (JOG FWD MAX) and No. 321 (JOG REV MAX) settings.

<Front Panel Centre Section>

㉙ **PREROLL button**

This is used for feeding and cueing the tape for manual editing.

When it is pressed, the tape travels to the preroll point where it stops.

The preroll time can be set on the setup menu No. 000 (P-ROLL TIME).

When this button is pressed while the IN or OUT button is held down, the tape can be cued to the IN or OUT point entered.

When the AUTO ENTRY on the setup menu No. 311 is set to “ENA”, IN point has been entered at the point where the PREROLL button is pressed even if the IN point has not been entered.

㉚ **AUTO EDIT button**

Automatic editing is executed when this is pressed after an edit point has been entered.

When the AUTO EDIT button is pressed though the IN point has not been entered, automatic editing is executed using the point at which the button was pressed as the IN point.

㉛ **PREVIEW/REVIEW buttons**

PREVIEW: When this is pressed after an edit point has been entered, the tape travels, editing is not performed, and the rehearsal can be activated on the screen connected to the recorder.

If it is pressed when the IN point has not been entered, the point at which the button was pressed is entered as the IN point, and preview is executed accordingly.

REVIEW: If this is pressed after a block has been edited, the now edited block can be played back and monitored on the screen connected to the recorder.

㉜ **IN (A IN)/SET/OUT (A OUT) buttons**

When the SET button is pressed while the IN (A IN) or OUT (A OUT) button is held down, the IN or OUT point is entered.

The A IN and A OUT buttons are used to enter audio IN and OUT points which are different from the corresponding video points for audio split editing.

While an IN or OUT point is being entered, the lamp in the IN or OUT button corresponding to the point being entered lights.

When this button is pressed after a point has been entered, the IN or OUT point value appears on the counter display. When the IN or OUT button is pressed together with the RESET button, the IN or OUT point entry is cleared.

㉝ **TRIM buttons**

These buttons are used to trim IN or OUT point finely.

When the “+” or “–” button is pressed while the IN or OUT button is held down, the entered edit point can be trimmed in 1-frame increments. When the “+” button is pressed, the tape is advanced by one frame; when the “–” button is pressed, it is rewound by one frame.

㉞ **ASSEMBLE button**

This is pressed for assemble editing.

The button is self-illuminating, and it is set ON (lamp lights) when it is pressed once and OFF (lamp goes off) when it is pressed again.

㉟ **INSERT buttons**

Press one of these five buttons to select the input signals to be edited during insert editing.

The buttons are self-illuminating, and they are set ON (lamp lights) when they are pressed once and OFF (lamp goes off) when they are pressed again.

(36) **Counter display**

This displays the TC and CTL count values, on-screen information and other messages.

<Front Panel Centre Section>

㊲ Time code buttons

These are used to set the TC or UB value.

SHIFT: When setting the TC or UB value, first press this button to stop the data running. Change the digit now flashing on the display.
Each time the button is pressed, the flashing moves to the right by one digit, and when it reaches the right-most digit, it returns to the left-most digit.
When it is kept depressed, the flashing moves consecutively.

ADJ: This is used to change the numeral of the digit now flashing on the display.
When the button is pressed once, the number is incremented by 1, and when it is kept depressed, the number is incremented consecutively.

START: This enters the data which has been changed by the SHIFT and ADJ buttons.
Also, Pressing this button when the TC or UB value are not set enables the TCG or UBG setting values to be confirmed.

RESET: When this button is pressed in the CTL mode, the display is reset to “00:00:00:00”.
In the CTL mode, the entered edit points are cleared.
In the TC/UB mode, the generator is reset when the button is pressed together with the SHIFT button.

㊳ Warning lamp

This lights to warn the operator of a particular item.

㊴ Cassette insertion display lamp

This lights when a cassette has been inserted into the unit.

㊵ Consumer cassette insertion display lamp

This lights when a cassette recorded on a consumer DV device has been inserted.

㊶ SCH lamp

This lights when the SCH of the external sync signal is within a specific range.

㊷ CF lamp

This lights when the colour framing is locked.

㊸ Level meters

These indicate the PCM audio signal CH1/CH2, CUE track signal and video signal levels.
The audio signal indicates the output signal levels.
The video signal indicates the input signal levels.

㊹ Input/output level controls*

These are used to adjust the recording and playback levels of the PCM audio signal CH1/CH2 and CUE track signals and the recording level of the composite video signals.
Each control located on the upper level is for adjusting the recording level, and each control located on the lower level is for adjusting the playback level.
These are “pull for variable” controls which means that they enable adjustment only when they have been pulled up. The signals levels are set to the unity value (preset value) when the controls have been pushed down.

㊺ Headphones jack

The sound being recorded, played back or edited can be monitored on stereo headphones when they are connected to this jack.

* The input levels are always fixed (at –18 dB) when “ON” has been selected as the setup menu No. 722 (INT SG) setting

<Front Panel Centre Section>

㊻ Volume control

This is used to adjust the headphones volume and the monitor output volume.
Whether the headphones output and monitor output volumes are to be linked or kept separate can be set on the setup menu No. 708 (MONI OUT). (Note that the headphones output volume is normally linked.)
When the volumes are kept separate, the monitor output is set to the unity value (preset value).

㊼ MONITOR SELECT switches

These are used to select the audio signals output to the monitor L/R channels.
Each time the “L” button is pressed, the signals output to the monitor L channel are selected in turn in the following order: CH1, CH2, CUE and back to CH1.
Each time the “R” button is pressed, the signals output to the monitor R channel are selected in turn in the following order: CH1, CH2, CUE and back to CH1.
The L or R lamp on the level meter display lights to indicate which signal is now being selected. (When the unit is set to “AUTO 1” or “AUTO 2” in No. 713 (MONI CH SEL) on the setup menu, then the display will change according to the monitor output.)

㊽ METER (FULL/FINE) selector switch

This switch is used to select the scale unit display mode for the audio level meters.

FULL mode: Standard scale units (ranging from –∞ to 0 dB) are used.

FINE mode: The scale is divided up into 0.5 dB increments.

<Front Panel Bottom Section>

(49) ENCODER CONTROL switch

This selects whether the adjustments to the video output signals are to be performed by the unit or by an external encoder/remote controller.

REMOTE: The adjustments to the video output signals are performed by the external encoder/remote controller.

LOCAL: The adjustments to the video output signals are performed by the unit.

(50) VIDEO LEVEL control and switch

When the ENCODER CONTROL switch is at LOCAL, the video level can be adjusted.
When it is at PRESET, the video level is set to the unity value (0 dB).
When it is at MANUAL, the video level can be adjusted using this control.

(51) CHROMA LEVEL control and switch

When the ENCODER CONTROL switch is at LOCAL, the chroma level can be adjusted. When it is at PRESET, the chroma level is set to the unity value (0 dB). When it is at MANUAL, the chroma level can be adjusted using this control.

(52) BLACK LEVEL control and switch (Composite output only variable.)

When the ENCODER CONTROL switch is at LOCAL, the black level can be adjusted. When it is at PRESET, the black level is set to the unity value (0 IRE). When it is at MANUAL, the black level can be adjusted using this control.

(53) CHROMA PHASE control and switch (Composite output only variable.)

When the ENCODER CONTROL switch is at LOCAL, the chroma level can be adjusted. When it is at PRESET, the chroma phase is set to the unity value (0°). When it is at MANUAL, the chroma level can be adjusted using this control.

(54) CF switch

This selects whether the playback framing is to be locked in 8/4-field increments or 2-field increments.

8F/4F: The framing is locked in 8/4-field increments.

2F: The framing is locked in 2-field increments.

Switching to 8F or 4F is enabled by the SETUP menu No. 107 (CAP.LOCK) setting.

(55) SYNCHRONIZE switch

This selects whether to provide phase synchronization between two decks.

ON: Phase synchronization is provided. Error-less editing can be performed.

OFF: Phase synchronization is not provided. The edit point will be off by several frames, but editing can be performed quickly.

(56) TC generator switch

REGEN: When the REGEN/PRESET switch is at REGEN, the internal time code generator is synchronized with the time code which the time code reader read from the tape. Whether to set TC or UB to REGEN can be selected at the setup menu No. 503 (TCG REGEN).

PRESET: When the REGEN/PRESET switch is at PRESET, presetting is enabled by the controls on the operation panel or by remote control.

REC RUN: The time code runs only during recording when the RUN MODE switch has been set to REC. The time code runs constantly when the REGEN/PRESET switch is set to REGEN.

FREE RUN: The time code runs regardless of the operation mode as long as the power is being supplied when the RUN MODE switch has been set to FREE.

<Front Panel Bottom Section>

(57) REC INHIBIT switch

This selects whether to enable or inhibit the recording on the cassette tape.

ON: The recording on the cassette tape is inhibited.
The REC INHIBIT lamp on the front panel now lights.

OFF: The recording on the cassette tape is enabled provided that the cassette's accidental erasure prevention mechanism has been set to the recording enable position.

(58) MENU button

When this is pressed, the setup menu appears on the TV monitor using VIDEO OUT 3 connector, and the setup menu No. appears on the display.

When it is pressed again, the setup menu setting mode is exited and the original operating mode is restored.

(59) SET button

When this is pressed, the data which has been set on the setup menu is entered. After data entry, the setup menu setting mode is exited and the original operating mode is restored.

(60) DIAG button

When this is pressed, VTR information is displayed. When it is pressed again, the original display is restored.

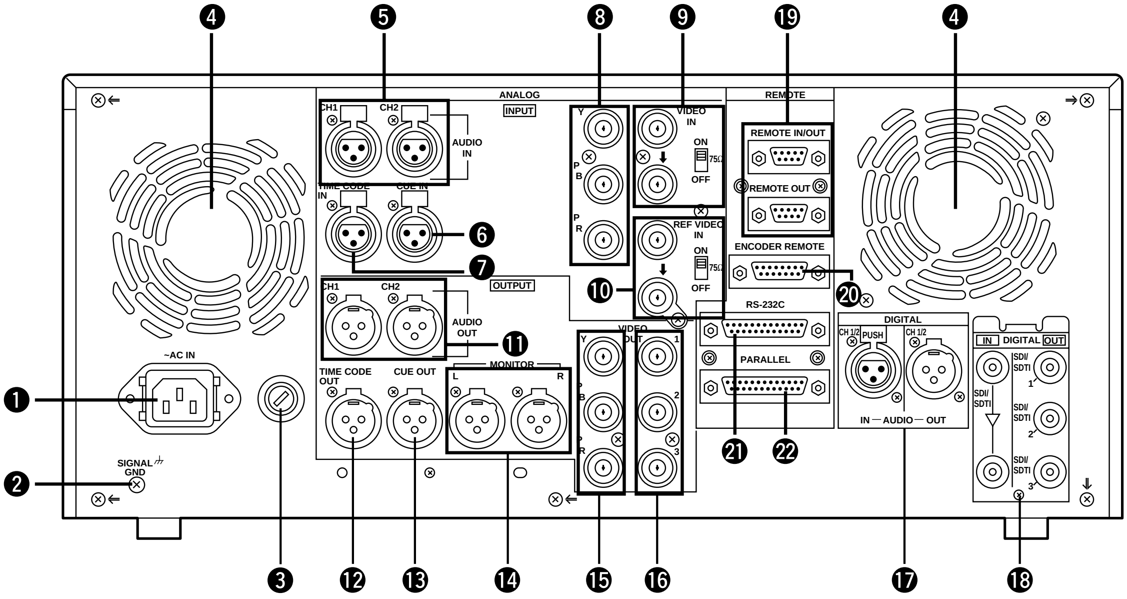
There are two types of VTR information: “HOURS METER” information and “WARNING” information. Switching between these types is enabled by pressing the search button.

Indicated on the “HOURS METER” screen are the power-on time, drum rotation time, tape travel time, loading count, etc.

Indicated on the “WARNING” screen are the warnings.

Controls and their functions

Connector area


❹
❺
❽
❾
⓳
❹
ANALOG
INPUT
CH1
CH2
AUDIO IN
TIME CODE IN
CUE IN
❻
❼
OUTPUT
CH1
CH2
AUDIO OUT
⓫
Y
PB
PR
VIDEO IN
ON
75Ω
OFF
REF VIDEO IN
ON
75Ω
OFF
❿
REMOTE
REMOTE IN/OUT
REMOTE OUT
ENCODER REMOTE
⓴
RS-232C
PARALLEL
DIGITAL
CH 1/2
PUSH
CH 1/2
IN — AUDIO — OUT
IN
DIGITAL
OUT
SDI/SDTI
SDI/SDTI 1
SDI/SDTI 2
SDI/SDTI 3
~AC IN
❶
SIGNAL GND
❷
TIME CODE OUT
CUE OUT
MONITOR
L
R
VIDEO OUT
Y
PB
PR
1
2
3
㉑
㉒
❸
⓬
⓭
⓮
⓯
⓰
⓱
⓲

<Connector area>

❶ **AC IN connector**
This is for connecting the unit to the power outlet using the power cord provided.

❷ **SIGNAL GND terminal**
This terminal is connected to the signa unit which is connected to the unit in order to reduce noise. It is not connected to ground for safety purposes.

❸ **Fuse holder**
This contains a fuse.

❹ **Fan motor**
This is for cooling the unit.
The Ⓦ lamp lights when trouble has caused the fan motor to stop. If the unit is still operated in the warning status, the temperature inside the deck will rise, and when it exceeds the safety temperature, all the unit's operations will be shut down.

❺ **ANALOG AUDIO IN connectors**
These are the analogue audio input connectors.

❻ **CUE IN connector**
The analogue signal to be recorded on the CUE track is supplied to this connector. The audio signals from a microphone can also be recorded by selecting the –60 dB input mode on the setup menu No. 702 (CUE IN LV).

❼ **TIME CODE IN connector**
This is the connector for recording the external time code on the tape.

❽ **ANALOG COMPONENT VIDEO IN connector**
The analogue component video signal is supplied to this connector.

❾ **ANALOG COMPOSITE VIDEO IN connectors and 75Ω termination switch**
The analogue composite video signal is supplied to these two connectors which are connected in a loop-through configuration. When the termination is required, set the switch to ON.

❿ **REF VIDEO IN connectors and 75Ω termination switch**
These are the input connectors for the reference video signals. When the termination is required, set the switch to ON.

⓫ **ANALOG AUDIO OUT connectors**
The analogue audio signals are output from these connectors.

⓬ **TIME CODE OUT connector**
The playback time code is output from this connector during playback.
During recording, the time code generated by the internal time code generator is output.

⓭ **CUE OUT connector**
The analogue signal recorded on the CUE track is output from this connector.

⓮ **MONITOR OUT connector**
During playback, the playback signals from the CUE track or PCM audio signal CH1/CH2 are output from this connector.

<Connector area>

⑮ **ANALOG COMPONENT VIDEO OUT connector**
The analogue component video signal is output from this connector.

⑯ **ANALOG COMPOSITE VIDEO OUT connectors**
The analogue composite video signals are output from these connectors.
The video signal with signals superimposed on it can be output from the VIDEO OUT3 connector.
The superimpose function can be set ON or OFF on the setup menu No. 006 (SUPER).

⑰ **DIGITAL AUDIO IN/OUT connector**
This I/O connector is for digital audio signals which comply with the AES/EBU standard.

⑱ **SERIAL DIGITAL COMPONENT AUDIO/VIDEO IN/OUT connector (optional AJ-YA750P interface board required)**
This I/O connector is for digital component audio and video signals which comply with the EBU Tech. 3267-E standard.
The connectors are known by different names when the AJ-YAC850P SDTI/SDI board (option) is used. For further details, refer to the operating instructions of the AJ-YAC850P board.

⑲ **Remote control connectors**
The unit can be controlled from an external source by connecting the unit with another unit or an external controller.
There are two remote control connectors, one for IN/OUT uses and the other for OUT uses.

IN/OUT: For connection with an external controller.
For connection with deck-to-deck operation.
OUT: For connection with parallel running operations.

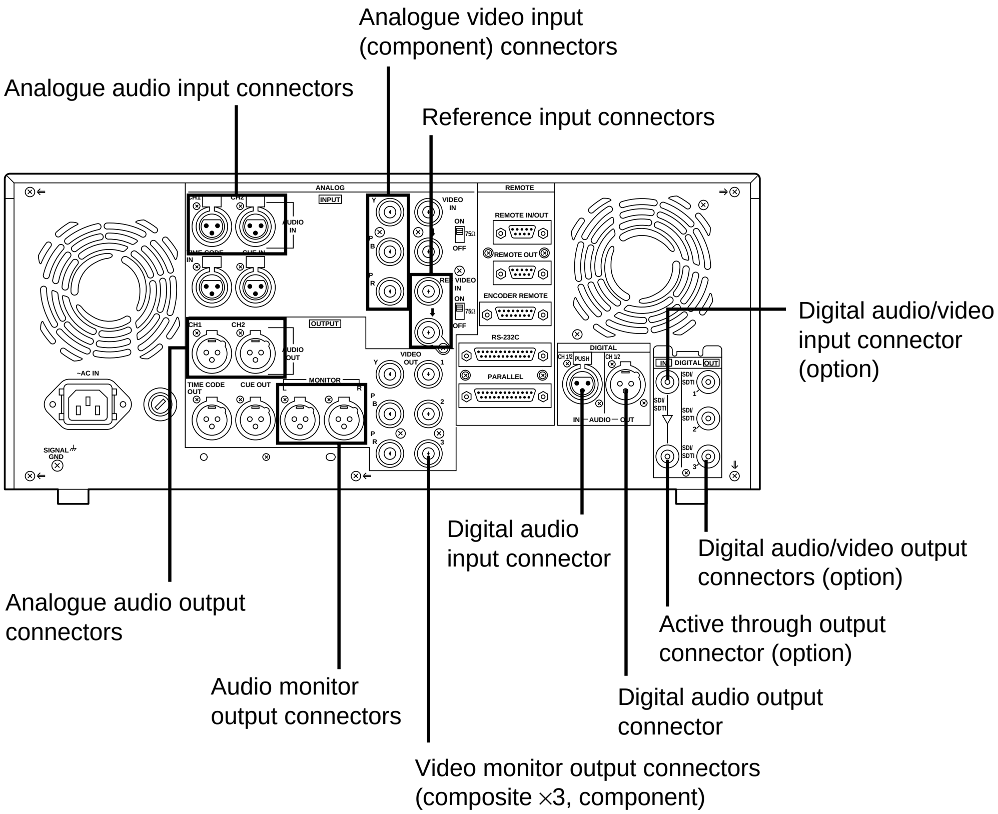
⑳ **ENCODER REMOTE connector**
The external encoder/controller is hooked up to this connector when the video output signal and other settings are to be adjusted from an external source.

㉑ **RS-232C connector**

㉒ **PARALLEL REMOTE connector**
This is used when operating the unit from an external source.

Connections when one unit is used

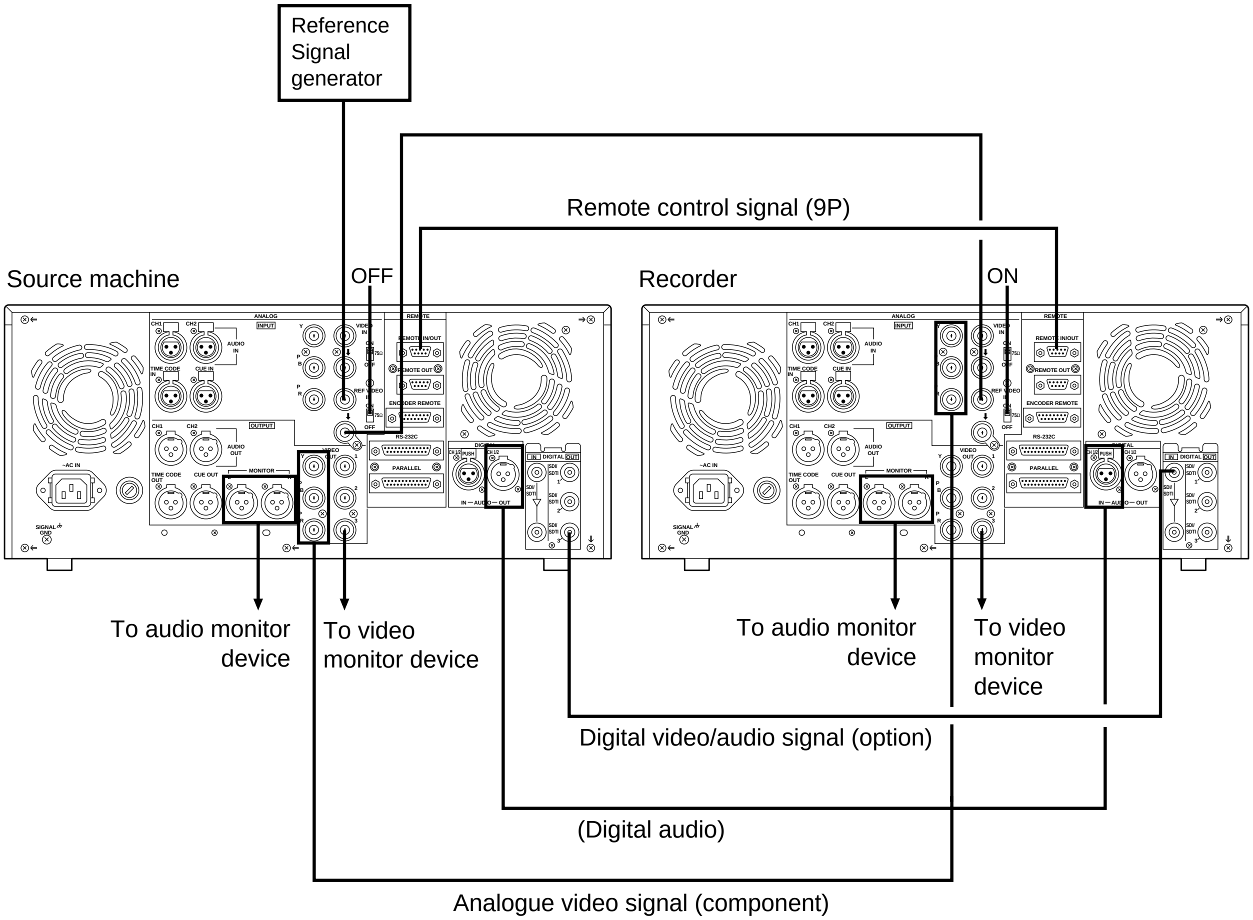
Set the CONTROL switch on the front panel to LOCAL.


Analogue video input (component) connectors
Analogue audio input connectors
Reference input connectors
Digital audio/video input connector (option)
Digital audio input connector
Digital audio/video output connectors (option)
Analogue audio output connectors
Active through output connector (option)
Audio monitor output connectors
Digital audio output connector
Video monitor output connectors (composite ×3, component)
ANALOG
INPUT
OUTPUT
AUDIO IN
AUDIO OUT
CH1
CH2
TIME CODE IN
CUE IN
TIME CODE OUT
CUE OUT
MONITOR
VIDEO IN
VIDEO OUT
REF. VIDEO IN
ON
OFF
75Ω
REMOTE
REMOTE IN/OUT
REMOTE OUT
ENCODER REMOTE
RS-232C
PARALLEL
DIGITAL
CH 1/2
PUSH
IN — AUDIO — OUT
SDI/SDTI
~AC IN
SIGNAL GND

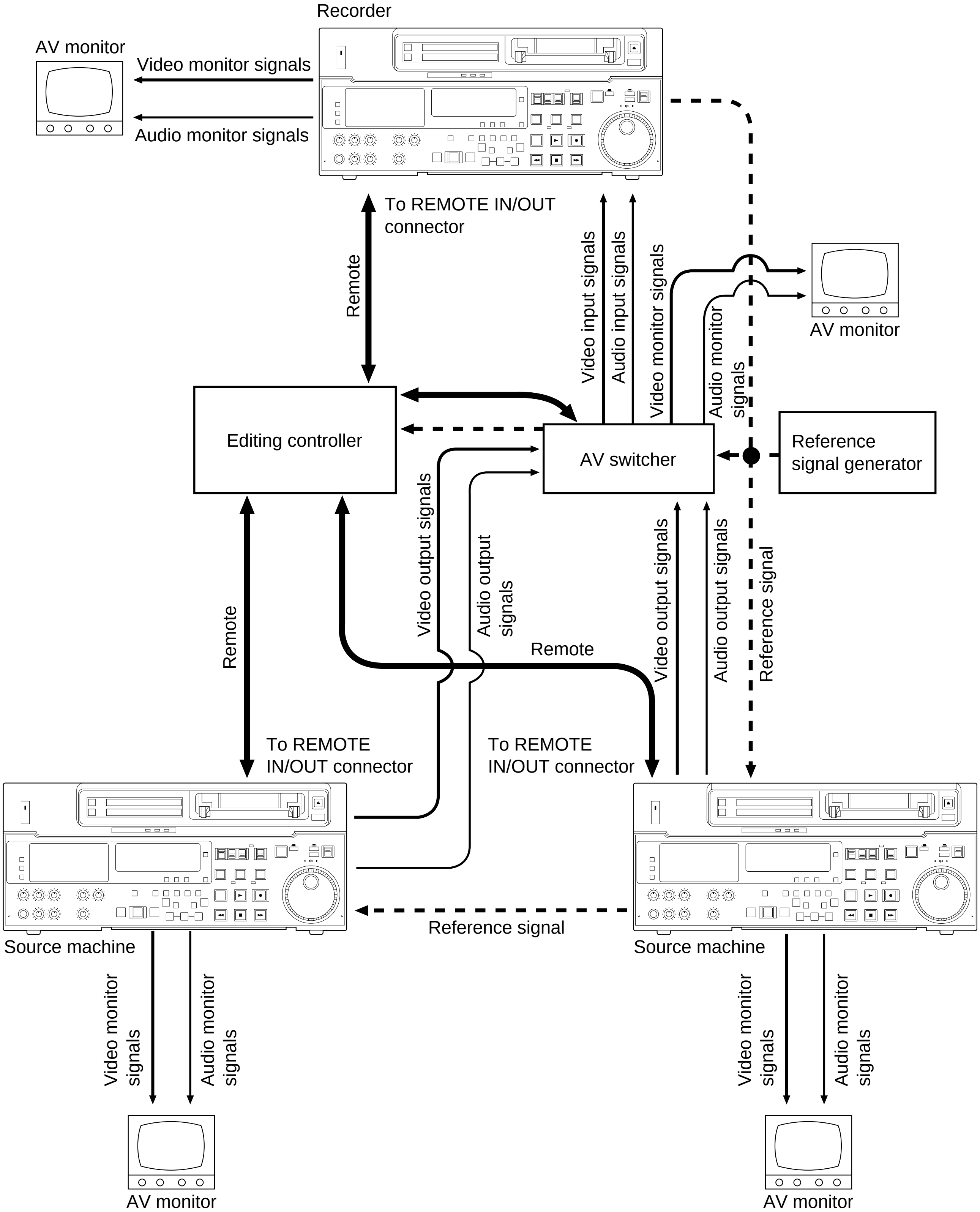
Connections when 2 units are used (deck to deck)

Source machine: • Set the CONTROL switch on the front panel to REMOTE.

Recorder: • Set the CONTROL switch on the front panel to LOCAL.

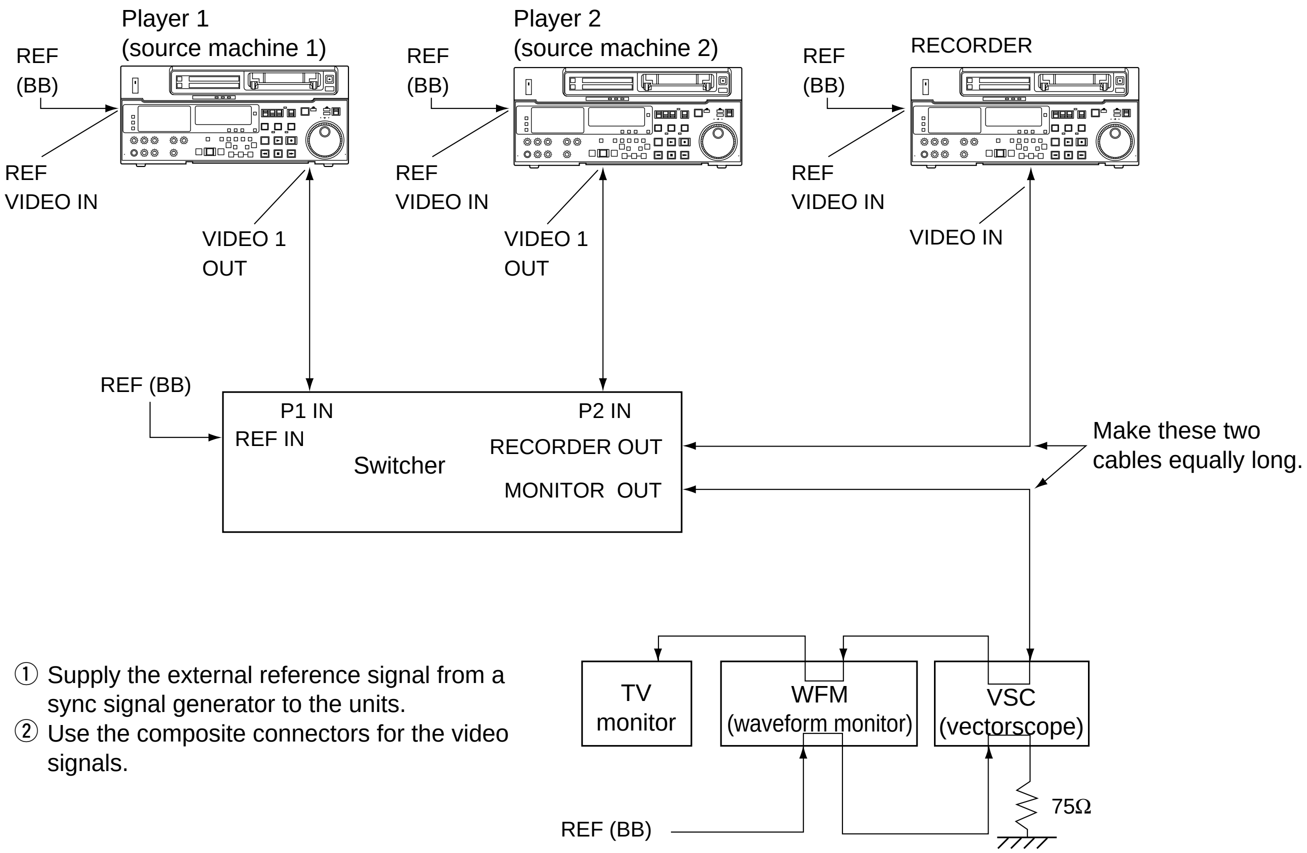

Reference Signal generator
Remote control signal (9P)
Source machine
OFF
Recorder
ON
To audio monitor device
To video monitor device
To audio monitor device
To video monitor device
Digital video/audio signal (option)
(Digital audio)
Analogue video signal (component)

Connections with editing controller


Recorder
AV monitor
Video monitor signals
Audio monitor signals
To REMOTE IN/OUT connector
Remote
Video input signals
Audio input signals
Video monitor signals
Audio monitor signals
AV monitor
Editing controller
AV switcher
Reference signal generator
Video output signals
Audio output signals
Remote
Remote
Video output signals
Audio output signals
Reference signal
To REMOTE IN/OUT connector
To REMOTE IN/OUT connector
Reference signal
Source machine
Source machine
Video monitor signals
Audio monitor signals
Video monitor signals
Audio monitor signals
AV monitor
AV monitor

<Note>
When an editing controller made by CMX is used, support must be provided at the editing controller side.

Connections for adjusting video output (encoder output) signals



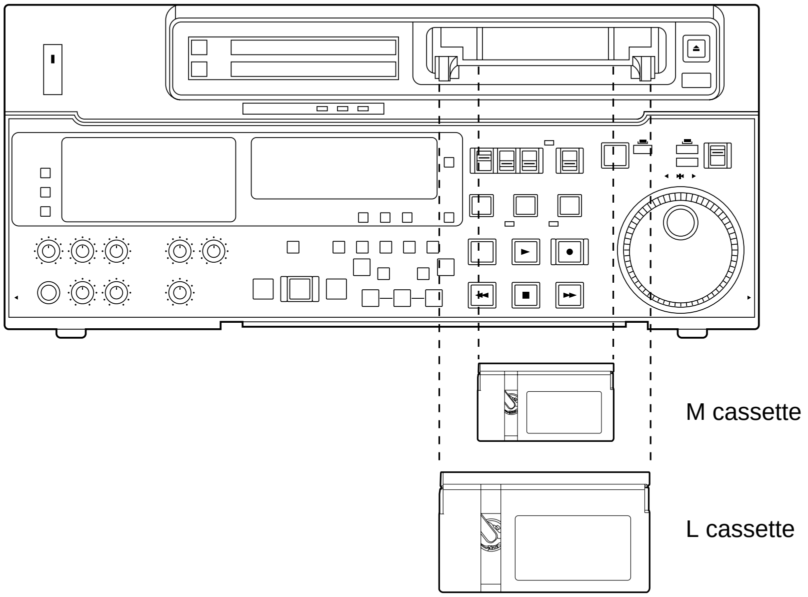
Player 1
(source machine 1)
Player 2
(source machine 2)
RECORDER
REF
(BB)
REF
VIDEO IN
VIDEO 1
OUT
VIDEO IN
REF (BB)
P1 IN
P2 IN
REF IN
Switcher
RECORDER OUT
MONITOR OUT
Make these two
cables equally long.
TV
monitor
WFM
(waveform monitor)
VSC
(vectorscope)
75Ω

① Supply the external reference signal from a sync signal generator to the units.

② Use the composite connectors for the video signals.

Type	Description
Consumer cassette (S cassette)	Tape designed exclusively for the camcorders used by consumers in general. Only playback is possible using the optional cassette adaptor. However, please note that long-play cassette tapes (80-minute standard/ 120-minute LP mode) cannot be used. **Use of Panasonic consumer DV cassette tapes is recommended.** Note that inserting a cassette tape without using the cassette adaptor can damage the unit.
M cassette	Recording/playback tape with a maximum capacity of 66 minutes. (AJ-P12MP, AJ-P24MP, AJ-P33MP, AJ-P46MP, AJ-P66MP)
L cassette	Recording/playback tape with a maximum capacity of 184 minutes. (AJ-P34LP, AJ-P66LP, AJ-P94LP, AJ-P126LP, AJ-5P92LP)

Align the cassette with the centre of the insertion slot and push it in gently. The cassette tape is loaded automatically.



<Note>
For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

<Cautions when playing back consumer DV tapes and DVCAM tapes>
- Consumer DV tapes and DVCAM tapes can be used for playback only.
- Consumer DV tapes which have been recorded in the LP mode cannot be played back.
- When materials which have been recorded on consumer DV tapes or DVCAM tapes are to be edited, record them onto a DVCPRO tape or tape of any other broadcasting VTR for use.
- Recordings cannot be made on consumer DV tapes and DVCAM tapes: this means that all functions related to recording, REC operation, editing selection and execution, TAPE/EE switching and other such operations are prohibited.
- The maximum transport speed for consumer DV tapes and DVCAM tapes is 32 times the normal tape speed.
- The maximum time for the STILL TIMER when consumer DV tapes or DVCAM tapes are used is set to 10 seconds, and the total STEP FWD time when the machine has been left standing in the STILL status is set to 1 minute.
- Slow-motion playback of consumer DV tapes and DVCAM tapes is not possible.
- In order to protect your tapes, it is recommended that repeated cue-up in the same location on a consumer DV tape or DVCAM tape be avoided as far as possible.
- Finally, check out the cautionary items for setup menu item No. 108 “FORMAT SEL”.

Switching on the power/inserting the cassette

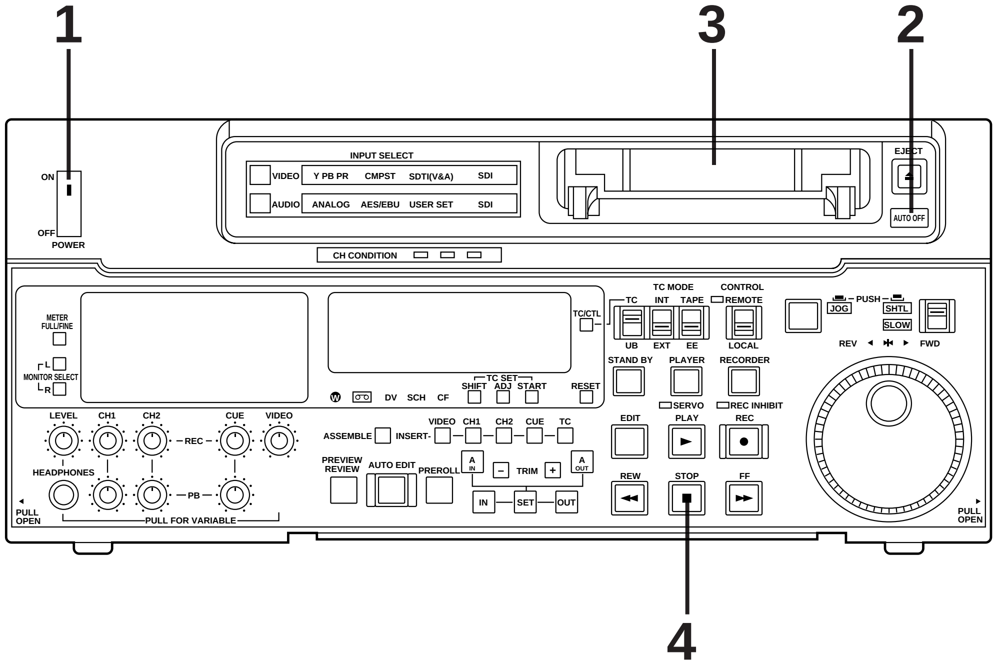
Before starting to operate the unit, check whether the equipment has been connected properly.

1 Turn on the power.

2 Check that the AUTO OFF lamp is off.
When condensation has formed or some other trouble has occurred, the AUTO OFF lamp lights, and all operations are disabled.

3 Insert the cassette tape.
Insert the tape at its proper position without force.

4 Check that the STOP lamp is on.
When the tape is inserted, the cylinder rotates automatically, the tape is loaded and the unit goes into the stop mode. The EJECT lamp goes off.


1
3
2
4
ON
OFF
POWER
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
CONTROL
TC
INT
TAPE
REMOTE
UB
EXT
EE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF

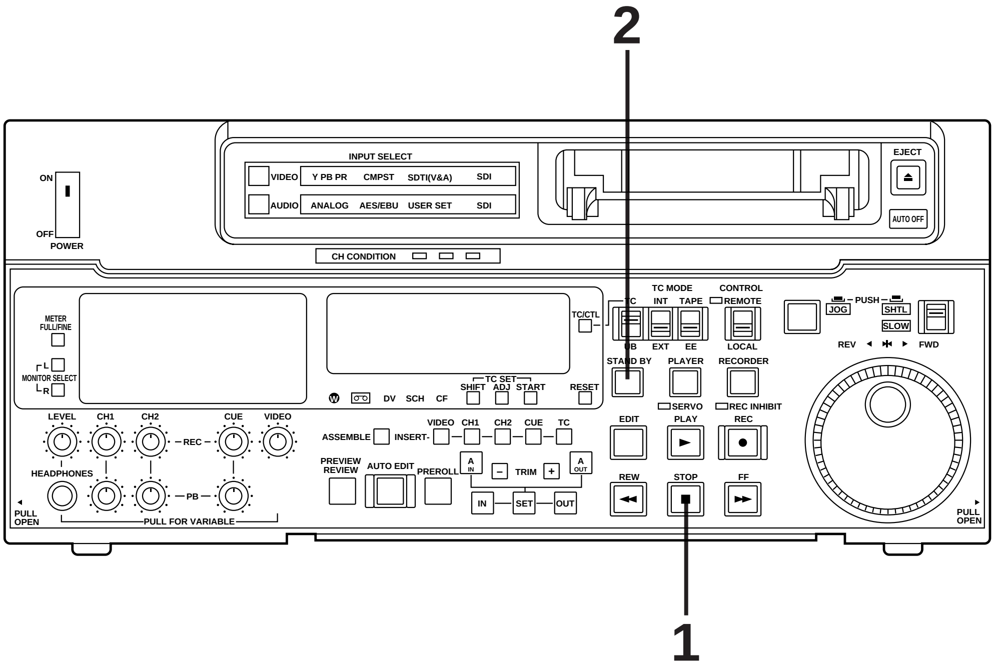
STOP/STAND BY mode

1 When the STOP button is pressed, the unit goes into the stop mode. The STOP lamp lights and the tape stops travelling.

- In order to protect the tape, the unit goes into the standby OFF mode after the time set by setup menu No. 400 (STILL TIMER) has elapsed. When the STOP, REW, FF or PLAY button is pressed, the unit will go into the appropriate mode.

2 When the STAND BY button is pressed, the unit goes into the standby ON/OFF mode. When the button's lamp is lit, the unit is in the standby ON mode.
When the button is pressed during the stop mode, the unit goes into the standby OFF mode and half-loading mode and the lamp goes off.
When the button is pressed during the standby OFF mode, the unit goes to the standby ON mode.

Still Timer Setting
In order to protect the tape and VTR helical heads, it is recommended that the Still Timer be set for automatic tape protection mode in 30 seconds or under.
Page 68 indicates the settings for menu item 400-Still Timer set. Still Timer settings 4 and below will best protect the tape.



1 Set the accidental erasure prevention tab on the cassette tape to the “recording” position and insert the tape.

2 Press the STOP button to place the unit in the stop mode.

3 Set the TAPE/EE switch to EE.
EE images now appear on the TV monitor.

4 Check that the REC INHIBIT lamp is off.
If this lamp is lit, set the REC INHIBIT switch to OFF.

5 Select the video and audio input signals and adjust their levels.

5-1 Selecting video/audio input signals

1. Connect the signals to be recorded.
2. Select the input signals using the INPUT SELECT switches on the front panel.
   The input signals corresponding to the lit lamps have been selected.

5-2 Adjusting the video level

1. Normally, the adjustment control ㊹ for the video input level should be pressed in. (unity value)
   The video signals will be recorded at the proper level.
2. To adjust the recording level, pull out the adjustment knob and adjust in the +3 dB to –3 dB range.

5-3 Adjusting the audio level

1. Adjust the audio input signal levels of the analogue audio CH1/CH2 signals and analogue cue signal. Keep the audio input/output level controls ㊹ pushed in (unity value).
   The audio signals will be recorded at the proper level.
2. To adjust the recording level, pull out the controls and adjust them. With the CUE signal, adjust the control in such a way that –20 dB will not be exceeded.

6 Press the REC and PLAY buttons together. The REC and PLAY lamps light, and recording commences.

7 To end the recording, press the STOP button.
Recording is ended, and the unit goes into the stop mode.

<Notes>

- Check that the SERVO lamp is lit during recording. If it flashes or if it is off, the images played back will be disturbed.
- Only the analogue composite video input signals can be adjusted. (The digital video and analogue component input signals cannot be adjusted.)
- The sound and pictures to be recorded are offset from the playback pictures by 5 frames and recorded. When, for instance, recording sound at a particular timing while the playback pictures are monitored, the sound to be recorded will be recorded at a position which is offset from the playback pictures by 5 frames.

Playback

1. Insert the cassette tape, and place the unit in the stop mode.

2. Press the PLAY button.
   Regular playback is now commenced.

3. Adjust the audio playback level.
   Pull out the audio level controls and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept in the pushed-in state (unity value).

4. To end playback, press the STOP button.
   The VTR now goes into the stop mode.

<Note>
Check that the SERVO lamp is lit during playback. If it flashes or if it is off, the images played back will be disturbed.

Jog/shuttle

Jog mode

1. Push the search dial to the "in" position.
   Be sure that the JOG lamp lights.

2. Rotate the search dial.
   The dial's clickstops are cleared, and the tape is played back at the speed corresponding to the speed at which the dial is turned. The maximum speed can be selected using the setup menu No. 320 (JOG FWD MAX) and No. 321 (JOG REV MAX) settings. When the dial rotation is stopped, a still picture appears. The playback picture is noise-free.

3. To transfer from the jog mode to another mode, press the appropriate button.

Shuttle mode

1. Push the search dial to release it from the "in" position. The SHTL lamp lights, and the unit goes into the shuttle mode.
   - Immediately after the power has been turned on, rotate the search dial and set it to the centre position.

2. Set the SHTL/SLOW switch to SHTL or SLOW.

3. Rotate the search dial.
   When the SHTL/SLOW switch has been set to SHTL, the playback picture speed is varied from 0 to ±60× normal speed depending on the position of the dial. The playback picture speed can be switched to ±16×, ±32× and ±60× normal speed with setting menu No. 101 (SHTL MAX).
   The dial's centre position is a clickstop where a still picture appears as the playback image. When the SHTL/SLOW switch has been set to SLOW, the playback picture speed is varied from –4 to +4× normal speed depending on the position of the dial. The maximum speed can be selected using the setup menu No. 317 (VAR FWD MAX) and No. 318 (VAR REV MAX) settings. However, noise appears at speeds other than –0.43 to +1× normal speed.
   The dial's centre position is a clickstop where a still picture appears as the playback image. The playback picture is noise-free.

4. To transfer from the shuttle mode to another mode, press the STOP button or other button.

<Note>
When the unit leaves the factory, its operation is set up so that it will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient for operation to be transferred to the variable-speed mode directly, it can also be transferred through the search button.
Set setting menu No. 100 (SEARCH ENA) to KEY.

Manual editing

1. Select the editing mode.
   ASSEMBLE: For assemble editing.
   INSERT: For insert editing.

2. Select the editing channel.
   In the case of insert editing, press the channel button corresponding to the signals to be edited, and check that its lamp is on.

3. Press the PLAY button.

4. Search for the position where the editing is to be commenced (IN point) while viewing the TV monitor, and press the PLAY and EDIT buttons together at the IN point.

5. Press the STOP or PLAY button at the position where editing is to be completed (OUT point) while viewing the TV monitor. The unit goes into the stop mode, and editing is completed.

<Note>
The sound and pictures to be recorded are offset from the playback pictures by 5 frames and recorded. When, for instance, recording sound at a particular timing while the playback pictures are monitored, the sound to be recorded will be recorded at a position which is offset from the playback pictures by 5 frames.

1 Press the PREROLL button.
The VTR now performs the preroll operation.

- When the edit IN point has been entered, the tape is rewound from the edit IN point for the duration set by setting menu “000,” and the unit then goes into the stop mode.
- When the edit IN point has not been entered, the tape is rewound for the duration set by setting menu “000” from the position where the button was pressed, and the unit then goes into the stop mode.

<Notes>

- The time code or CTL signal must be continuously recorded between the edit IN point and preroll point.
- When the IN point has not been entered, whether to enter the IN point and perform preroll or to perform preroll without entering the IN point can be selected at setting menu No. 311 (AUTO ENTRY).

Automatic editing (Deck to Deck)

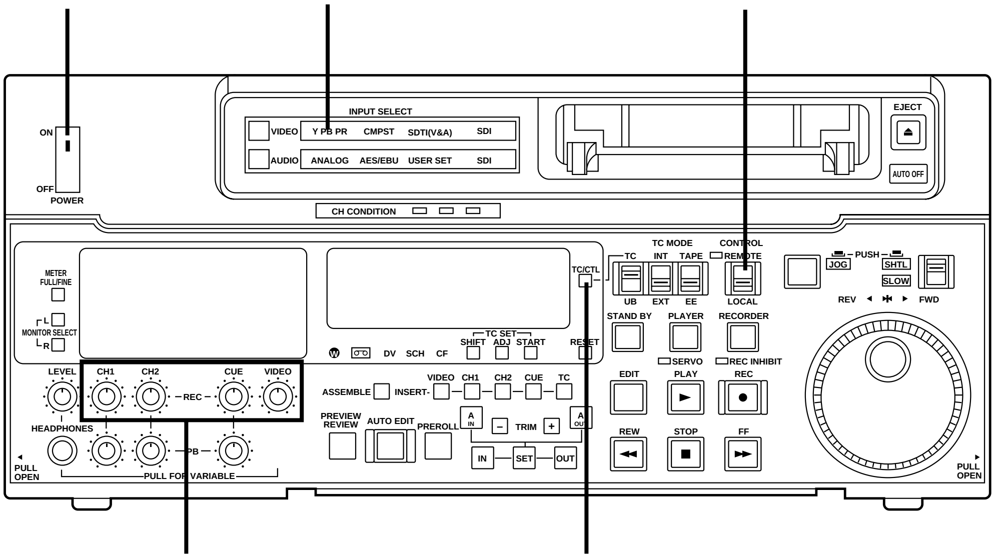
Editing refers to the job of using a prerecorded tape to produce a complete recording by joining together separate cuts and deleting unnecessary parts.

The basic steps taken for editing are as follows.

1. Set the CONTROL switch to REMOTE on the player and to LOCAL on the recorder.
2. Select the editing mode.
3. Enter the edit points of the recorder and player.
4. Check and modify the edit points.
5. Check (Preview) before proceeding with the editing.
6. Proceed with the editing.
7. Check (Review) the recording that has resulted from the editing.

Switch settings and adjustments

When the unit is used as the recorder:


INPUT SELECT
VIDEO Y PB PR CMPST SDTI(V&A) SDI
AUDIO ANALOG AES/EBU USER SET SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT L R
TC/CTL
TC MODE
TC INT TAPE
UB EXT EE
CONTROL
REMOTE
LOCAL
PUSH
JOG SHTL SLOW
REV FWD
STAND BY PLAYER RECORDER
SERVO REC INHIBIT
TC SET
SHIFT ADJ START
RESET
DV SCH CF
LEVEL CH1 CH2 CUE VIDEO
REC
PB
HEADPHONES
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE INSERT
VIDEO CH1 CH2 CUE TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN SET OUT
EDIT PLAY REC
REW STOP FF

Set the POWER switch to ON.

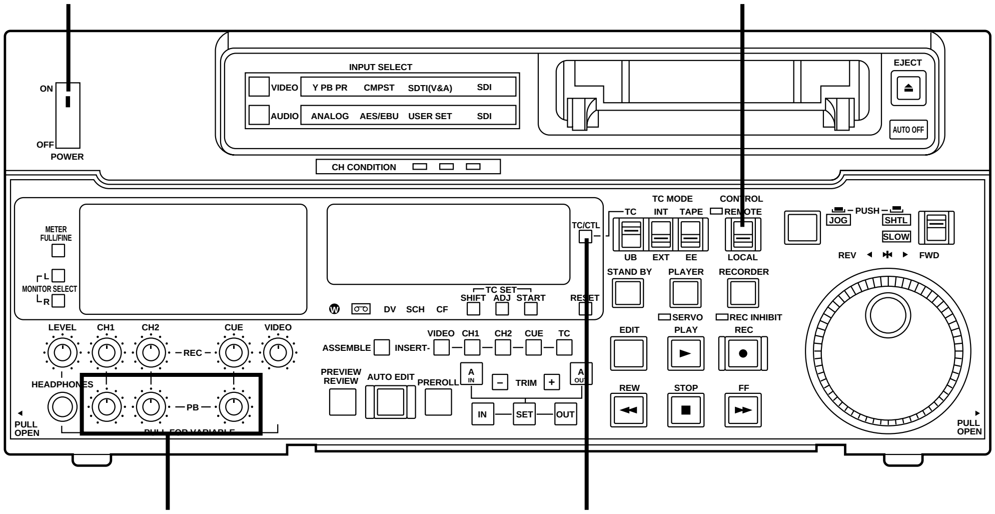
Select the video and audio input signals using the INPUT SELECT switches.

Set the CONTROL switch to LOCAL.

Adjust the recording level.

Set the time counter display to TC or CTL.

When the unit is used as the player:


INPUT SELECT
VIDEO Y PB PR CMPST SDTI(V&A) SDI
AUDIO ANALOG AES/EBU USER SET SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT L R
TC/CTL
TC MODE
TC INT TAPE
UB EXT EE
CONTROL
REMOTE
LOCAL
PUSH
JOG SHTL SLOW
REV FWD
STAND BY PLAYER RECORDER
SERVO REC INHIBIT
TC SET
SHIFT ADJ START
RESET
DV SCH CF
LEVEL CH1 CH2 CUE VIDEO
REC
PB
HEADPHONES
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE INSERT
VIDEO CH1 CH2 CUE TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN SET OUT
EDIT PLAY REC
REW STOP FF

Set the POWER switch to ON.

Set the CONTROL switch to REMOTE.

Adjust the playback level.

Set the time counter display to TC or CTL.

Automatic editing

Select the editing mode

1 Select the editing mode.
For assemble editing, press the ASSEMBLE button.
For insert editing, press the INSERT button.

ASSEMBLE: The assemble editing mode (in which cuts are joined together) is established.

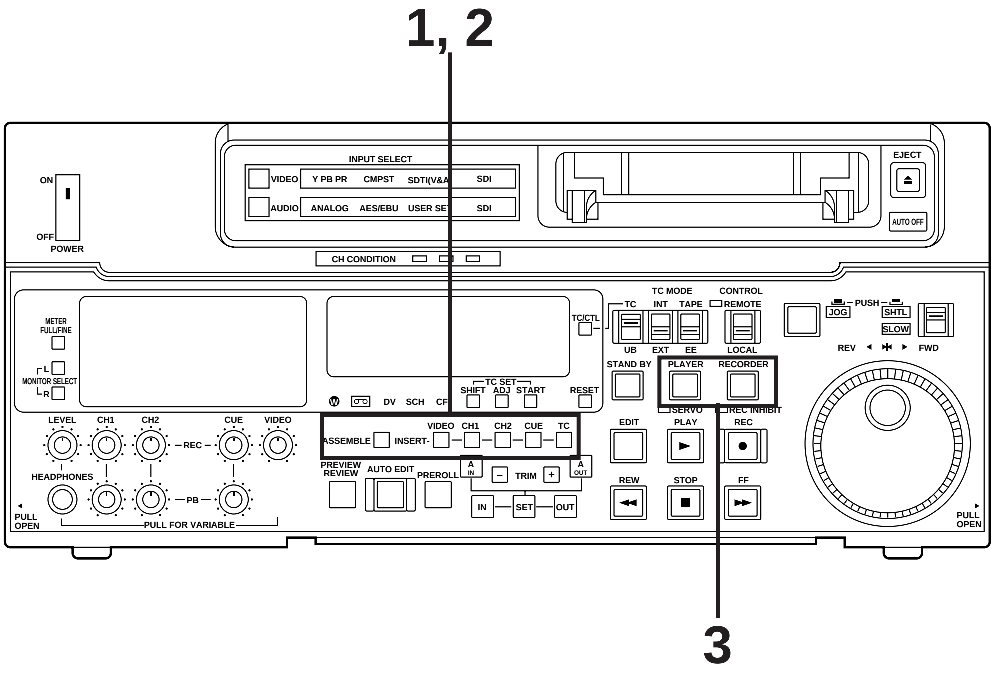
INSERT: The insert editing mode (in which cuts are inserted) is established.

2 Select the editing channel.
With assemble editing, the ASSEMBLE lamp lights.
With insert editing, press the button of the channel whose signals are to be edited and lights its lamp.

3 Select the VTR to be operated (this setting is performed when editing with 2 VTRs).
Press the PLAYER or RECORDER button to select the VTR.

PLAYER: Press this button to operate the player VTR and enter the edit points.

RECORDER: Press this button to operate the recorder VTR (this unit) and enter the edit points.


1, 2
3
INPUT SELECT
VIDEO
AUDIO
Y PB PR
CMPST
SDTI(V&A)
SDI
ANALOG
AES/EBU
USER SET
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
CONTROL
TC
INT
TAPE
REMOTE
UB
EXT
EE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
LEVEL
CH1
CH2
CUE
VIDEO
REC
PB
HEADPHONES
ASSEMBLE
INSERT
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
PULL FOR VARIABLE
PULL OPEN

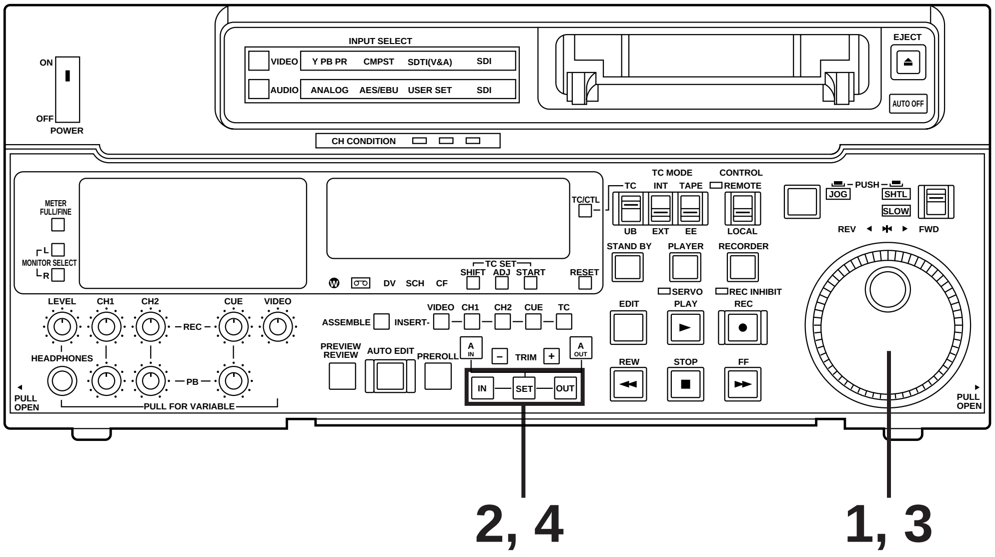
Entering the edit points

1. Search for the edit IN point by performing the jog or shuttle operation.
   Establish the still picture mode at the desired position.
   Refer to page 29 for details on the jog/shuttle operations.

2. Press the SET button while holding down the IN button.
   The edit IN point is now entered.
   The edit IN point value now appears on the display.

3. Search for the edit OUT point by performing the jog or shuttle operation.
   Establish the still picture mode at the desired position.
   Refer to page 29 for details on the jog/shuttle operations.

4. Press the SET button while holding down the OUT button.
   The edit OUT point is now entered.
   The edit OUT point value now appears on the display.



INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
PB
HEADPHONES
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
2, 4
1, 3

Match frame processing function

When using two VTRs for editing, a total of four edit points—namely, the player's IN and OUT points and the recorder's IN and OUT points—need to be entered. However, since the last edit point is calculated automatically, only three of these edit points must be entered.

Negative duration function

This function is used by combining setup menu No. 301 (IN/OUT DEL) and No. 302 (NEGA FLASH) described on page 64.

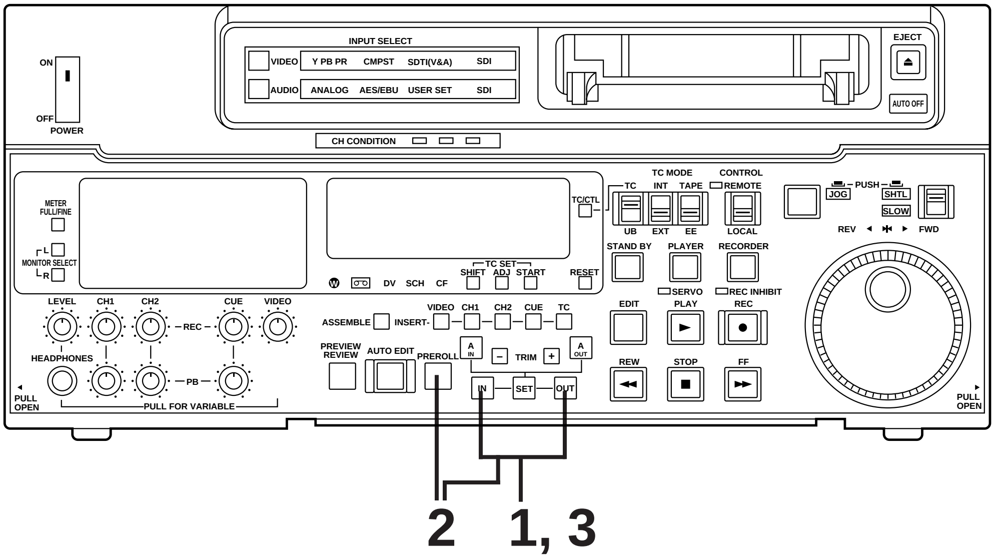
Checking the edit points

1. Press the IN (or OUT) button to check the edit point.
   The value of the entered edit point appears on the display.

2. Press the PREROLL button while holding down the IN (or OUT) button to check the image at the edit point.
   The tape is cued at the edit IN (or OUT) point, and the still picture mode at that point is displayed.
   - The EE mode is established if the TAPE/EE switch has been set to the “EE” position when “STOP” has been selected for the setup menu No. 313 (AFTER CUE-UP).

3. Press and hold down the IN and OUT buttons together to check the edit duration.
   The duration time appears on the display.

Calculating the duration
- When both edit points have been set, the duration between the two edit points.
- When only one edit point has been set, the duration between the set data and the current tape address.
- When neither edit point has been set, the duration of the previously edited interval.



Modifying the edit points

1 Re-entering the edit points
Search for the new edit point by performing the jog or shuttle operation, and press the IN (or OUT) and SET buttons together to re-enter the edit point.

2 Modifying the edit point in frame units (trim function)
Press the TRIM button while holding down the IN (or OUT) button.
The edit point is put ahead by 1 frame each time the + button is pressed.
The edit point is put back by 1 frame each time the – button is pressed.

3 Resetting the edit points

3-1 Resetting both the edit IN and OUT points

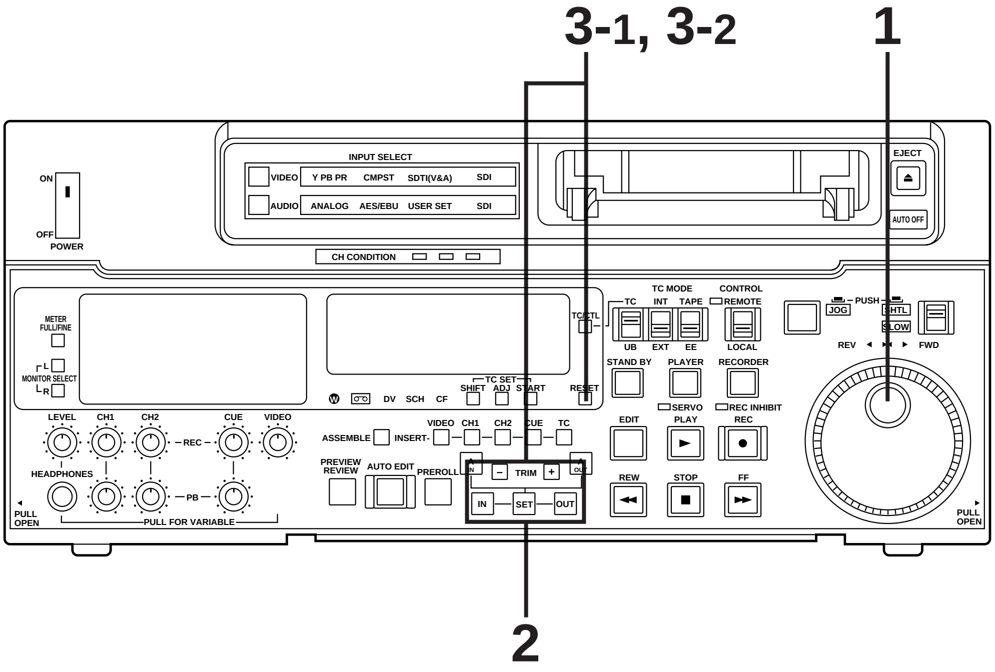
- Press the RESET button.

3-2 Resetting either the edit IN or OUT point

- Press the RESET button while holding down the IN (or OUT) button.

<Notes>

- Edit points can be reset only in the CTL mode.
- An edit OUT point can be reset even while editing is in progress.
- The IN and OUT points are automatically reset during the eject mode.

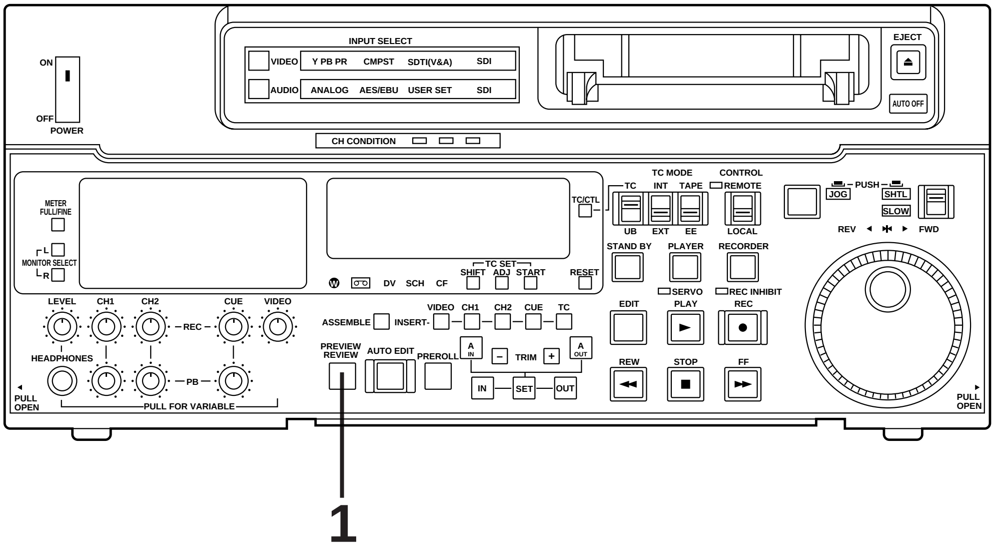

3-1, 3-2
1
2
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
IN
OUT
–
TRIM
+
SET
EDIT
PLAY
REC
REW
STOP
FF

Automatic editing

Preview

1 After the edit points have been entered, press the PREVIEW button.
Normal preview is now performed.

<Notes>
- If the edit IN point has not been entered, the position where the PREVIEW button was pressed will be entered at the edit IN point.
- To stop the preview at any time, press the STOP button.
- If the PREVIEW button is pressed again while preview is in progress after the IN point, preview will start again from the beginning.
- When the edit OUT point is reached, the unit automatically goes into the stop mode.



ON
OFF
POWER
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
JOG
PUSH
SHTL
SLOW
REV
FWD
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
1

Executing automatic editing

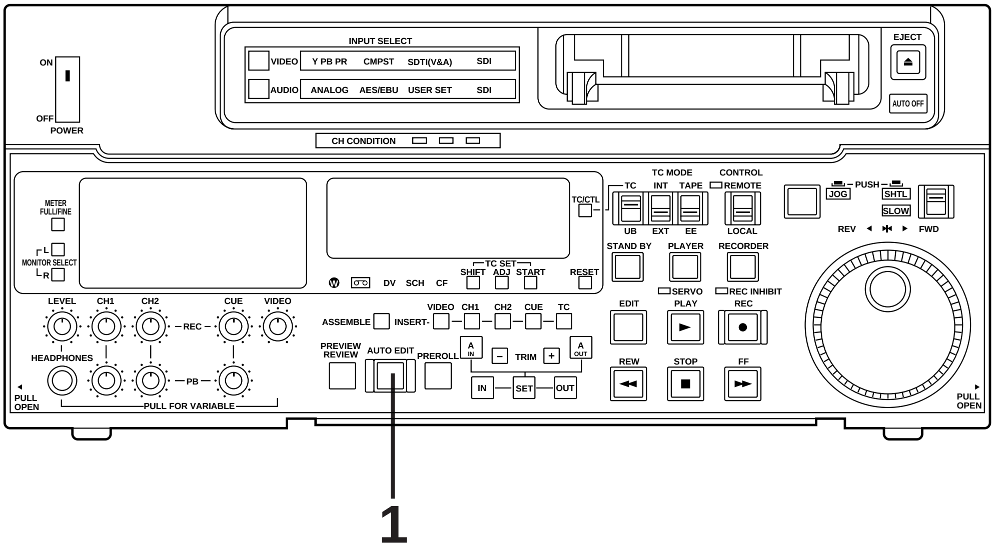
1. Press the AUTO EDIT button.
   Automatic editing is now performed.
   - To stop the editing at any time, press the STOP button.
   - When the edit OUT point is reached, the unit goes into the stop mode after postrolling.

Postroll
With assemble editing, editing continues for approx. 2 seconds even after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.
With insert editing, the unit goes into the play mode after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

Retry function
If the AUTO EDIT button is pressed again after the STOP button has been pressed to stop the editing, editing will start again from the beginning.

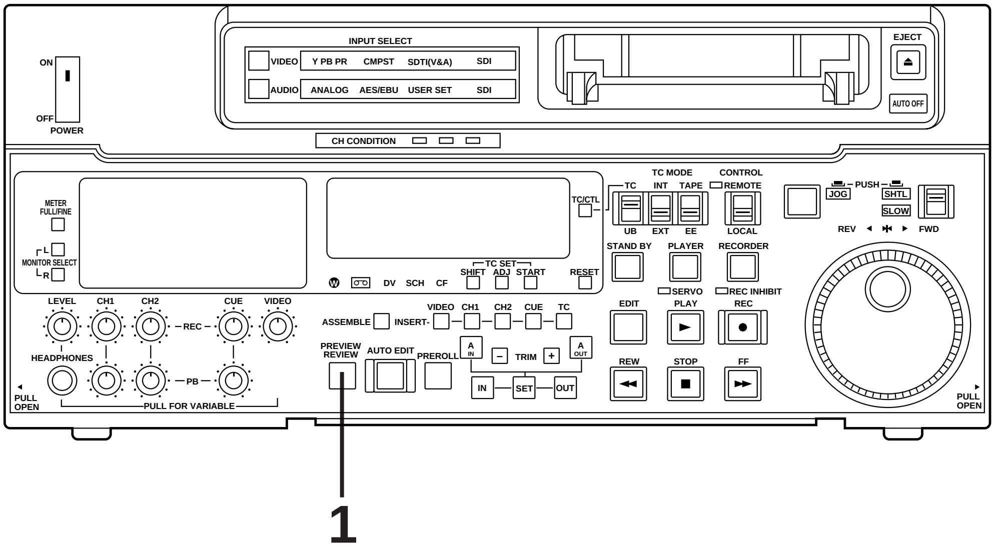
Auto tag editing
If the AUTO EDIT button is pressed when the next edit point has not yet been entered upon completion of editing, the previous edit OUT point will be entered as the IN point, and editing is performed accordingly.
To release the auto tag mode, press one of the tape transport buttons (PLAY, etc.).

<Note>
The entered points are automatically cleared after editing is executed. However, the previous editing points can be recalled by pressing the TRIM+ (or TRIM–) and SET buttons together.


INPUT SELECT
VIDEO Y PB PR CMPST SDTI(V&A) SDI
AUDIO ANALOG AES/EBU USER SET SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT L R
TC/CTL
TC MODE
CONTROL
TC INT TAPE REMOTE
UB EXT EE LOCAL
PUSH
JOG SHTL SLOW
REV FWD
STAND BY PLAYER RECORDER
TC SET
SHIFT ADJ START RESET
DV SCH CF
SERVO REC INHIBIT
LEVEL CH1 CH2 CUE VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE INSERT-
VIDEO CH1 CH2 CUE TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN SET OUT
EDIT PLAY REC
REW STOP FF
PULL OPEN
1

Review

1 Upon completion of the editing, press the REVIEW button.
The review is started in the recorder.
- To stop the review at any time, press the STOP button.
- When the edit OUT point is reached, the unit goes into the stop mode after postrolling.


INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
CONTROL
TC
INT
TAPE
REMOTE
UB
EXT
EE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
EDIT
PLAY
REC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
–
TRIM
+
A OUT
IN
SET
OUT
REW
STOP
FF
PULL OPEN
1

Split editing

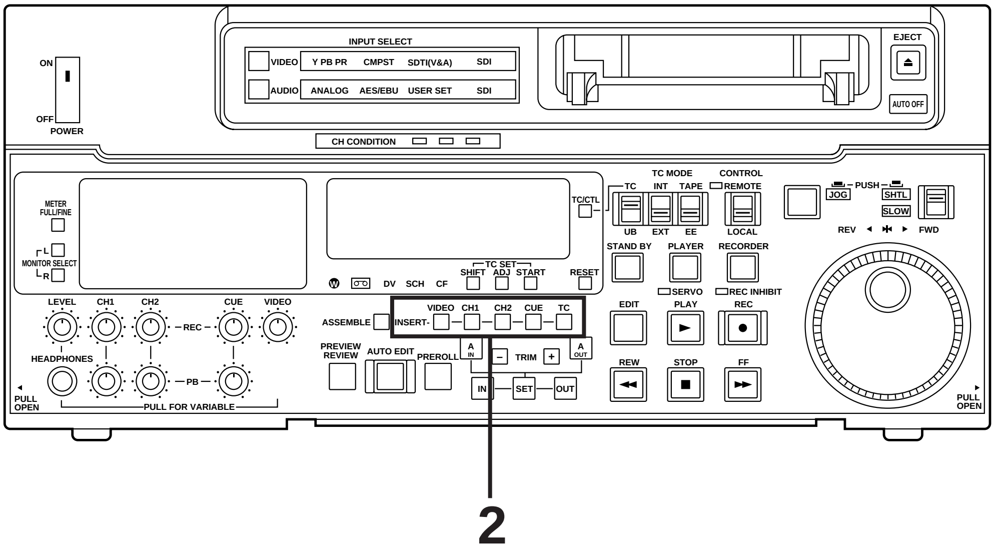
Split editing refers to editing where the editing channels are switched while insert editing is in progress.

1 Perform insert editing.

2 Switch the editing channel.
When, for instance, sound from AUDIO CH2 is to be additionally inserted during video channel insert editing:

2-1 Press the AUDIO CH2 button during video channel editing.
The lamp in the button lights and the AUDIO CH2 sound is insert edited.

2-2 Press the AUDIO CH2 button again and turn off the lamp in the button.
This completes the AUDIO CH2 insert editing.


INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
CONTROL
TC
INT
TAPE
REMOTE
UB
EXT
EE
LOCAL
JOG
PUSH
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
EDIT
PLAY
REC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
REW
STOP
FF
IN
SET
OUT
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
PULL OPEN
2

Audio split editing

The video edit points and audio edit points can be entered separately, and they can be offset from each other and edited.
Audio edit points can be entered, deleted and revised only when the insert editing mode has been selected. After the edit points have been entered, follow the same operating procedure as that for insert editing.

■ Entering the edit points

Video IN point: Press the SET button while holding down the IN button.
Video OUT point: Press the SET button while holding down the OUT button.
Audio IN point: Press the SET button while holding down the A IN button.
Audio OUT point: Press the SET button while holding down the A OUT button.

■ Deleting the edit points

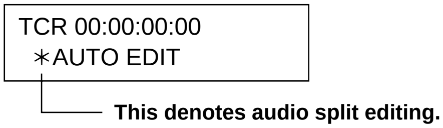
Video IN point: Press the RESET button while holding down the IN button.
Video OUT point: Press the RESET button while holding down the OUT button.
Audio IN point: Press the RESET button while holding down the A IN button.
Audio OUT point: Press the RESET button while holding down the A OUT button.

■ Modifying the edit points

Video IN point: Press the TRIM+ or TRIM– button while holding down the IN button.
Video OUT point: Press the TRIM+ or TRIM– button while holding down the OUT button.
Audio IN point: Press the TRIM+ or TRIM– button while holding down the A IN button.
Audio OUT point: Press the TRIM+ or TRIM– button while holding down the A OUT button.

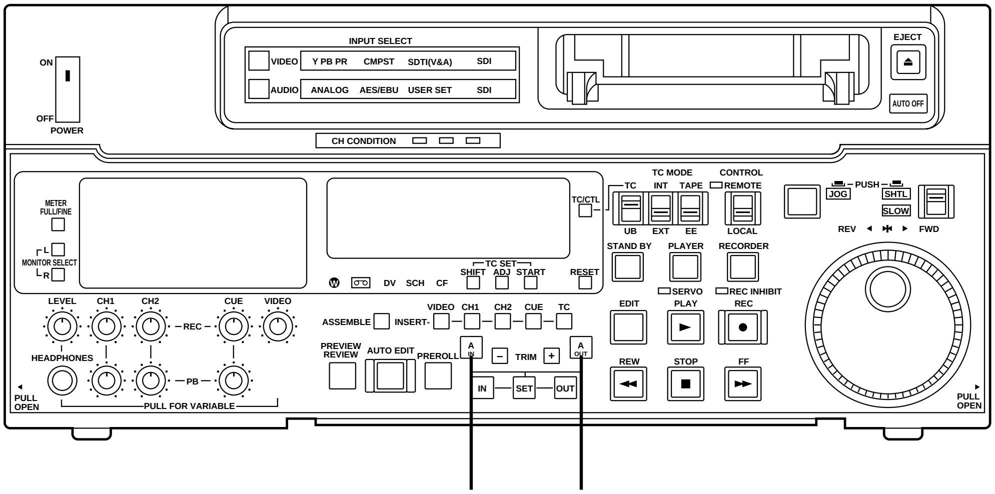
■ Indicating audio split editing

When the audio edit points are entered, "∗" appears superimposed on the front panel and TV monitor to denote audio split editing.



TCR 00:00:00:00
∗AUTO EDIT

This denotes audio split editing.

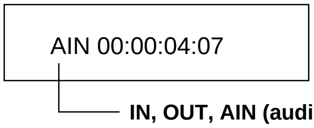

INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
EDIT
PLAY
REC
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
REW
STOP
FF
PULL OPEN

A IN Button
A OUT Button

■ Displaying the audio split edit points

The edit points are displayed on the front panel as shown below. (The figure shows an audio IN point.)

Operations
Video IN point: Press the IN button.
Video OUT point: Press the OUT button.
Audio IN point: Press the A IN button.
Audio OUT point: Press the A OUT button.



IN, OUT, AIN (audio IN point), AOUT (audio OUT point)

<Note>
If the editing mode is switched to assemble editing after audio edit points have been entered, these points will be deleted.

■ Cueing up the tape to the edit points

Cue-up to video IN point: Press the PREROLL button while holding down the IN button.
Cue-up to video OUT point: Press the PREROLL button while holding down the OUT button.
Cue-up to audio IN point: Press the PREROLL button while holding down the A IN button.
Cue-up to audio OUT point: Press the PREROLL button while holding down the A OUT button.

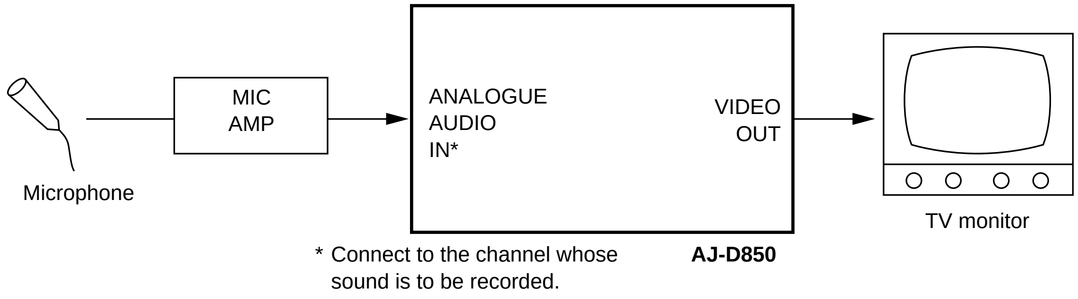
■ Duration display

The duration can be displayed on the front panel only.
Duration from video IN point to OUT point: Press the IN and OUT buttons simultaneously.
Duration from audio IN point to OUT point: Press the A IN and A OUT buttons simultaneously.

Match frame processing mechanism
When two VTRs are used for audio split editing operations, there will be a total of eight edit points: two pairs of video IN and OUT points, one for the player and the other for the recorder, and two pairs of audio IN and OUT points, one for the player and the other for the recorder. Since the remaining three points are automatically calculated when five of these eight edit points are entered, up to five edit points can be entered.

<Note>
If, during audio split editing, only the video OUT point (or audio OUT point) is entered and automatic editing is executed without the audio IN point (or video IN point) having been entered, editing will continue until the audio OUT point (or video OUT point) is entered or the STOP button is pressed to suspend operation.

Operating procedure 1



1. Select INT_VO as the setup menu No. 322 (AUD MEM MODE) setting.
2. Select the same setting for the channel (CH1 or CH2) on which the sound is to be recorded and for the setup menu No. 323 (AUD MEM CH) channel.
3. Insert the cassette tape for which the voice-over editing is to be performed.
4. Press the insert button for the channel (CH1 or CH2) on which the sound is to be recorded and ensure that its lamp lights.
5. Press the PLAY button.
6. Search the position (IN point) where voice-over editing is to start while watching the TV monitor.
7. Press the IN and SET buttons simultaneously at the IN point.
8. Input the audio signals to be recorded to the channel which was selected in step 2.
9. Search the position (OUT point) where voice-over editing is to end while watching the TV monitor.
10. Press the A OUT and SET buttons simultaneously at the OUT point. The audio signals to be recorded are stored in the memory.
11. Press the STOP button.
12. Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>
The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

Operating procedure 2

1. Select INT_VO as the setup menu No. 322 (AUD MEM MODE) setting.

2. Select the same setting for the channel (CH1 or CH2) on which the sound is to be recorded and for the setup menu No. 323 (AUD MEM CH) channel.

3. Insert the cassette tape for which the voice-over editing is to be performed.

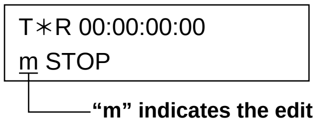
4. Press the insert button for the channel (CH1 or CH2) on which the sound is to be recorded and ensure that its lamp lights.

5. Enter the IN and OUT points of the positions where voice-over editing is to be performed.

6. Press the PREVIEW button.

7. While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel which was selected in step 2. The audio signals to be recorded are stored in the memory.

8. Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.
   <Note>
   The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.



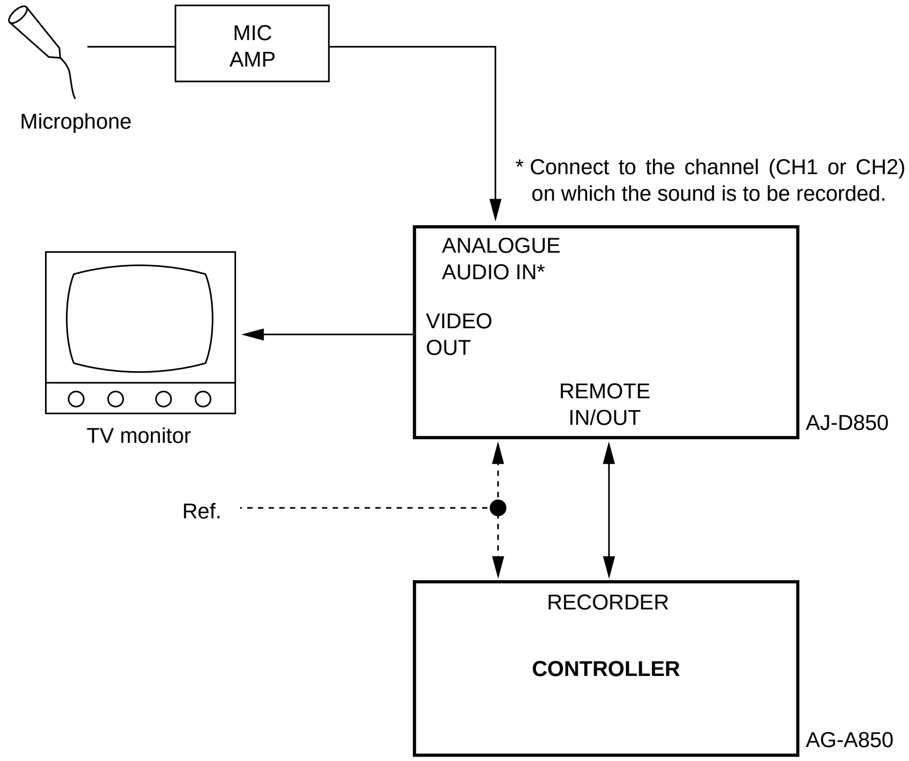
```
T∗R 00:00:00:00
m STOP
```

"m" indicates the edit mode in which the internal memory is used.

<Notes>
Memory capacity

- Up to 20 seconds of sound can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored.
- When INT_VO or INT_X, which is performed using the internal memory in the setup menu No. 322 (AUD MEM MODE) setting, "m" appears on the front panel and is superimposed onto the TV monitor display to indicate that the editing mode using the internal memory is now being used.

For operation with an editing controller (AG-A850)


MIC
AMP
Microphone
* Connect to the channel (CH1 or CH2) on which the sound is to be recorded.
ANALOGUE
AUDIO IN*
VIDEO
OUT
REMOTE
IN/OUT
AJ-D850
TV monitor
Ref.
RECORDER
CONTROLLER
AG-A850

1. Select INT_VO as the setup menu No. 322 (AUD MEM MODE) setting.
2. Select the same setting for the channel (CH1 or CH2) on which the sound is to be recorded and for the setup menu No. 323 (AUD MEM CH) channel.
3. Insert the cassette tape for which the voice-over editing is to be performed into the VTR.
4. Set the CONTROL switch on the VTR to the REMOTE position.
5. Set the controller's SOURCE selector to AUX1.
6. Press the insert button for the channel (CH1 or CH2) on which the sound is to be recorded.
7. Enter the IN and OUT points of the positions where voice-over editing is to be performed.
8. Press the PREVIEW button.
9. While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel that was selected in step 6. The audio signals to be recorded are stored in memory.
10. Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>
For further details on the AG-A850, refer to the operating instructions of the AG-A850.

Example: To record cross-faded audio signals onto CH2

■ Connections

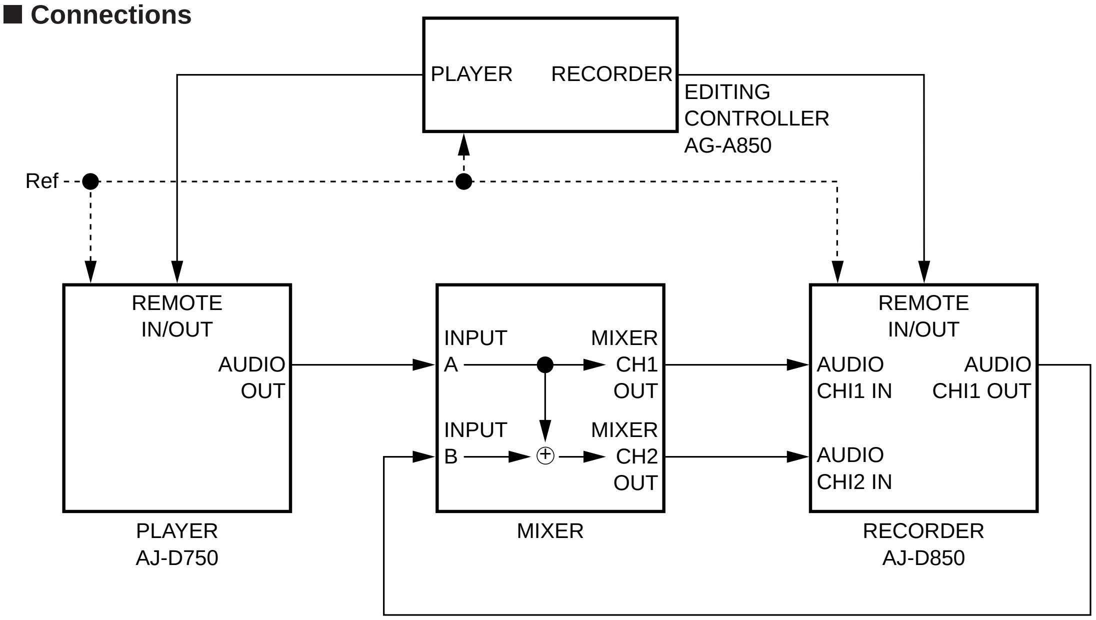
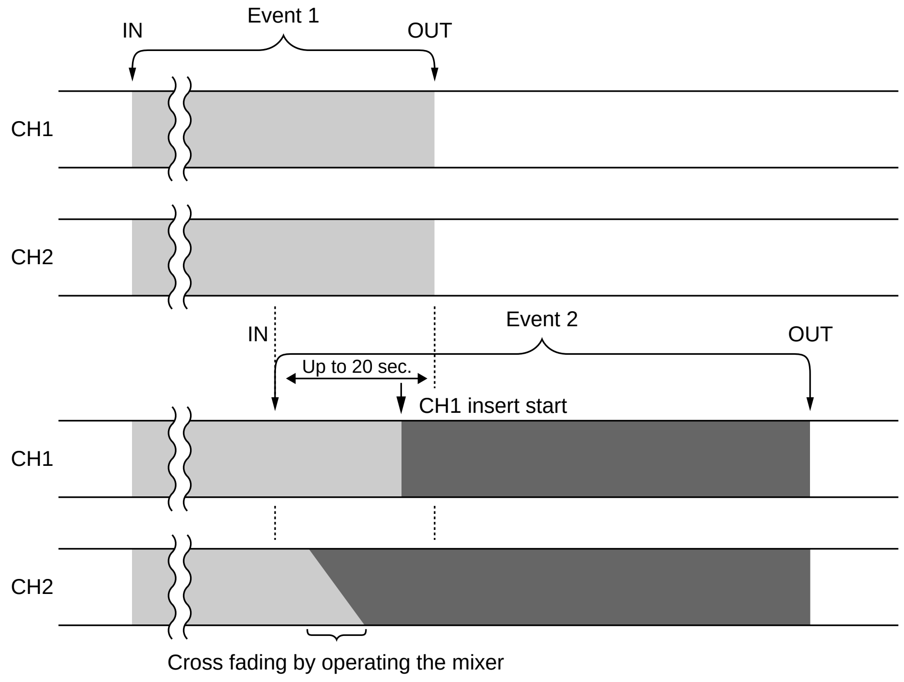

PLAYER
RECORDER
EDITING CONTROLLER AG-A850
Ref
REMOTE IN/OUT
AUDIO OUT
PLAYER AJ-D750
INPUT A
INPUT B
MIXER CH1 OUT
MIXER CH2 OUT
MIXER
REMOTE IN/OUT
AUDIO CHI1 IN
AUDIO CHI1 OUT
AUDIO CHI2 IN
RECORDER AJ-D850

Fig. 1

Fig. 2


Event 1
IN
OUT
CH1
CH2
Event 2
IN
OUT
Up to 20 sec.
CH1 insert start
CH1
CH2
Cross fading by operating the mixer

1. Select INT_X as the setup menu No. 322 (AUD MEM MODE) setting.
2. Select CH2 as the setup menu No. 323 (AUD MEM CH) setting.
3. Select the audio CH1 and CH2 in the insert editing.
   <Note>
   Select the video as well if the video signals are also going to be edited.

4 Enter the edit points of the first event on the player's tape.

5 Enter the edit points of the first event on the recorder's tape.

6 Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT and CH2 OUT connectors. (The same audio signals will be delivered through CH1 and CH2 of the mixer.)

7 Press the AUTO EDIT button. The first event is now recorded on the recorder's tape. (See Fig. 1.)
The last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory.

8 Release the insert button for CH1 so that only the insert button for CH2 is engaged.
<Note>
Select the video as well if the video signals are also going to be edited.

9 Enter the edit point of the next event on the player's tape.

10 Enter the edit point of the next event on the recorder's tape.
<Note>
The IN point must be set up to 20 seconds (more than the cross fading duration) before the previous edit OUT point.

11 Operate the mixer in such a way that the player's audio output signals are output from the mixer's CH1 OUT connectors and that the recorder's (this unit) CH1 OUT audio signals are output from the mixer's CH2 OUT connectors. [The recorder's (this unit) CH1 OUT signals are the audio signals supplied from the internal memory.]

12 Press the AUTO EDIT button.

13 Operate the mixer starting at the IN point, and change the mixer's CH2 OUT signals gradually from the recorder's CH1 OUT audio signals into the player's audio output signals for the mixer's CH2 OUT connectors. (Cross fading)

14 Press the CH1 insert button after the mixer's CH2 output signals have been changed into the player's audio output signals. The STOP mode is established at the OUT point, and the last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory. (See Fig. 2.)

15 To continue editing, repeat steps 8 to 14.

<Notes>
Before attempting to perform voice-over editing or audio cross channel editing using the audio memory unit (AJ-YA752, option), proceed with the following settings for the unit (AJ-D850).

1. Select either AMU_X or AMU_VO as the setup menu No. 322 (AUD MEM MODE) setting.
2. For audio cross channel editing, set the channel on which the signals are to be recorded on setup menu No. 323 (AUD MEM CH).
3. Proceed with operation, using the AJ-YA752 operating instructions as a reference.

■ Additional line recording/playback function

- Select the mode for recording signals in additional lines using setup menu item No. 800 (ADD LINE).

Off:	No signals are recorded in additional lines.
YC422:	The input signals are recorded in 1 line in the 422 mode.
YC411:	The input signals are recorded in 1 line in the 411 mode.
Y1_B/W:	The input signals are recorded in 1 line in their original form as the luminance signal.
Y1_PBF:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the Y signal is recorded in 1 line.
C1:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the C signal is recorded in 1 line.
Y2_B/W:	The input signals are recorded in 2 lines in their original form as the luminance signal.
Y2_PBF:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the Y signal is recorded in 2 lines.
C2:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the C signal is recorded in 2 lines.

- Select the additional lines for recording on the sub-menu screen.
- The number of lines in which the teletext signals can be recorded differs depending on which mode for recording the signals in the additional lines has been selected.

■ Teletext signal recording/playback function

- Up to 28 lines per frame of the teletext signals which are input can be recorded and played back.
- The number of lines in which the signals can be recorded differs depending on the setup menu item No. 800 (ADD LINE) setting.
- Depending on the setup menu item No. 800 (ADD LINE) setting, it may not be possible to record the input teletext signals in all of the lines.
- Listed below are the numbers of lines per frame in which the signals can be recorded in each mode.

Mode	Additional lines	Teletext signals
Off	0 line/frame	28 lines/frame
YC422	1 line/frame	15 lines/frame
YC411	1 line/frame	20 lines/frame
Y1_B/W	1 line/frame	28 lines/frame
Y1_PBF	1 line/frame	28 lines/frame
C1	1 line/frame	28 lines/frame
Y2_B/W	2 lines/frame	15 lines/frame
Y2_PBF	2 lines/frame	15 lines/frame
C2	2 lines/frame	15 lines/frame

Video output (encoder output) signal adjustments

After this system has been connected, the video output signal (ENCODER OUT) must be adjusted if AB roll editing (editing using two source machines) using an editor, for instance, is to be error-free and accurate. (This adjustment must be repeated when one of the connecting cables has been replaced and whenever the connections are changed.)

The adjustment procedure using this unit is outlined below.

1 Check the connections. (See page 23.)

2 Set the REMOTE/LOCAL switch ㉒ on the front panel bottom section to the adjustment position (LOCAL).

REMOTE: For adjusting the video output signals using an external encoder remote controller.

LOCAL: For adjusting the video output signals using this unit.

3 Adjust the source machine independently.

3-1 When using the preset values

Set the PRESET/MANUAL switches of the VIDEO LEVEL, CHROMA LEVEL, BLACK LEVEL and CHROMA PHASE controls to PRESET.

3-2 When adjusting the video output signals without using the preset values

1 Play back a cassette tape on which standard colour bar signals have been recorded.

2 Adjust the controls in such a way that the waveforms on the waveform monitor (WFM) and vectorscope (VSC) resemble those shown in the figures below.

A **Black level**

Adjust the control to eliminate deviation.

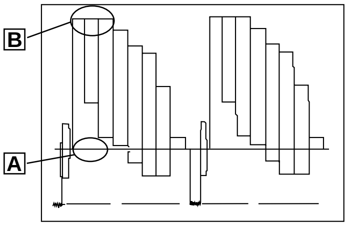
B **Video level**

Adjust this level to 700 mV.

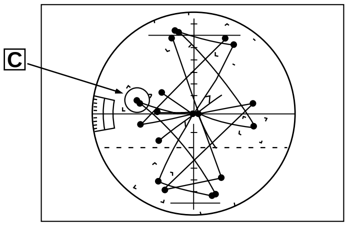
C **Chroma level and chroma phase**

Adjust the two controls in such a way that the light spot of the vector waveforms comes inside the rectangular grid mark.

■ Waveform on WFM



■ Waveform on VSC



4 Perform the same adjustments on the source machine connected to the unit.

Setup (default settings)

The unit's major settings are performed by making selections on menus.
The setting menus appear on the TV monitor when the TV monitor and VIDEO OUT 3 connector in the unit's connector area are hooked up.

Changing the settings

1 Press the MENU button.
The setup menu appears on the TV monitor and setup menu No. appears on the counter display. (If the setup has already been performed, the screen showing the changes made last will appear.)

2 Rotate the search dial and select the item to be set.
The cursor (∗) on the menu screen moves and the item No. on the display flashes.

- When the dial is rotated clockwise, the item No. is incremented from 001→002→003→004 and so on; when it is rotated counterclockwise, the item No. is decremented.
- The search dial should be used in jog mode if at all possible.
- Hold down the PLAY button and press the FF (next major item) or REW (previous major item) buttons to select the menu by major item.

3 While holding down the search button, rotate the search dial at the position where the change is to be made.
The setting No. now flashes.
When the dial is rotated clockwise, the setting value is incremented; when it is rotated counterclockwise, it is decremented.

4 Release the search button when the setting is completed.
The setting value on the menu screen and display flashes.

- During the SHTL mode, the item moves if the search dial is not at the STILL position.

5 Repeat steps 2 through 4 to change another item.

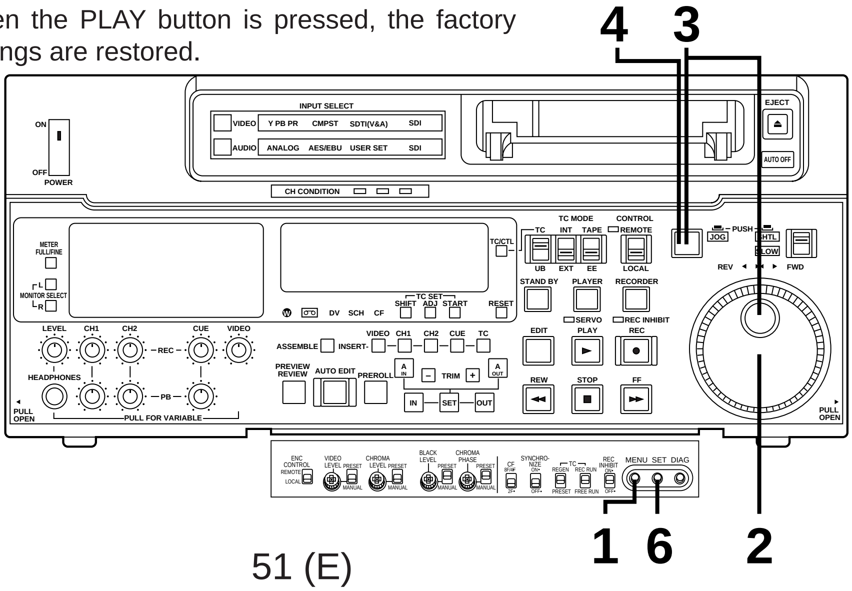
6 Press the SET button.
The changes are now stored in the memory.

- To return the items to the settings established before the changes were made, press the MENU button.

To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. **The following message will now appear:**

```
SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>
```

When the PLAY button is pressed, the factory settings are restored.


4
3
1
6
2
INPUT SELECT
VIDEO
AUDIO
EJECT
POWER
CH CONDITION
TC MODE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
REV
FWD
STAND BY
PLAYER
RECORDER
RESET
EDIT
PLAY
REC
REW
STOP
FF
ASSEMBLE
INSERT
PREVIEW REVIEW
AUTO EDIT
PREROLL
TRIM
IN
SET
OUT
HEADPHONES
PULL FOR VARIABLE
MENU SET DIAG

<Note>

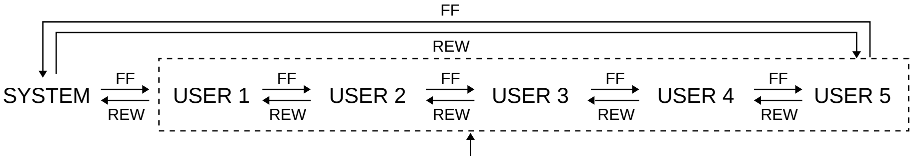
- When the RESET button is pressed to return to the factory settings, the factory settings are restored only for the user file currently being used and other user files are not affected.
- The changed SYSTEM menu contents are recorded even if the MENU button is pressed.

This unit can store up to 5 user files (user 1 to user 5) containing different menu settings, and these files can be selected and used.

Changing the file

1. Press the MENU button.

2. Hold down the STAND BY button and press the FF button to switch to the next user file. Hold down the STAND BY button and press the REW button to switch to the previous user file.



USER FILE
Each user file contains the following items.
- BASIC
- OPERATION
- INTERFACE
- EDIT
- TAPE PROTECT
- TIME CODE
- VIDEO
- AUDIO
- V BLANK
- MENU

3. Repeat the operation in step 2 to select the user file to be used and press the SET button. The user file is changed and stored in the memory.

<Note>
SYSTEM menu items are not included in user files 1 to 5.
Therefore, after selecting the user file, switch to the SYSTEM file and set the SYSTEM menu items.

Lock mode can be set to protect the settings in the system files and user files (USER2 – USER5). Settings can no longer be changed when this mode is set.
To set and release the lock mode for the system files and user files use setup item No. 30 (MENU LOCK) and setup menu item No. A03 (MENU LOCK), respectively.

Setting and releasing the lock mode.

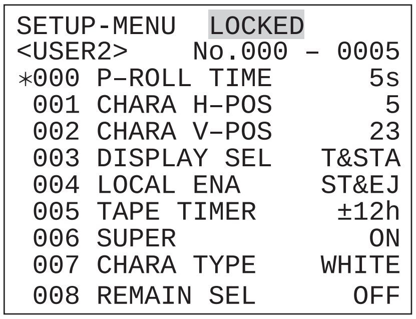
1. Press the MENU button.

2. While holding down the STAND BY button, press the REW or FF button, and select the file for which the lock mode is to be set or released.

3. Turn the search dial and move the cursor (∗) on the menu screen to setup item No. 30 (MENU LOCK) or setup menu item No. A03 (MENU LOCK) for the system or user file.

4. While holding down the search button, turn the search dial and select lock mode setting or release.
   To set the lock: Select the 0001 (ON) setting.
   To release the lock: Select the 0000 (OFF) setting.

   When the lock has been set, “LOCKED” flashes on the menu screen. In addition, the counter display stops flashing and lights.

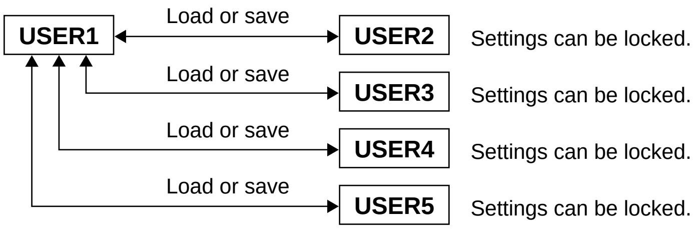


```
SETUP-MENU  LOCKED
<USER2>    No.000 – 0005
∗000 P–ROLL TIME      5s
 001 CHARA H–POS       5
 002 CHARA V–POS      23
 003 DISPLAY SEL   T&STA
 004 LOCAL ENA     ST&EJ
 005 TAPE TIMER     ±12h
 006 SUPER            ON
 007 CHARA TYPE    WHITE
 008 REMAIN SEL      OFF
```

5. Press the SET button. The setting is now stored in the memory.

<Notes>
- The lock mode cannot be set for the USER1 file settings.
- Even if the RESET button is pressed, the files which has been set to the lock mode cannot be reset to the factory settings.

The contents of the USER2 – USER5 files can be copied (loaded) into the USER1 file. In addition, the contents of the USER1 file can be copied (saved) to the USER2 – USER5 files.


USER1
Load or save
USER2
Settings can be locked.
Load or save
USER3
Settings can be locked.
Load or save
USER4
Settings can be locked.
Load or save
USER5
Settings can be locked.

Loading a user file

1. Press the MENU button.

2. While holding down the STANDBY button, press the REW or FF button, and select USER1.

3. Turn the search dial and move the cursor (∗) on the menu screen to setup item No. A00 (LOAD).

```
SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
 803 TELETEXT DET   AUTO
∗A00 LOAD          USER2
 A01 SAVE          USER2
 A02 P.ON LOAD       OFF
 END
```

4. While holding down the search button, turn the search dial and select the user file whose contents are to be loaded into USER1.

5. Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

```
SETUP-MENU LOAD

  USER2 →  USER1 OK?
   YES<PLAY>/NO<STOP>
```

Counter display

```
TCR  00:00:00:00
SETUP LOAD U-2 → U-1
```

The user file number selected in step 4 is displayed in the shaded area.

6. Press the PLAY button. The settings of the user file selected in step 4 are loaded, and the USER1 menu display appears. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.

7. Turn the search dial and move the cursor (∗) on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).

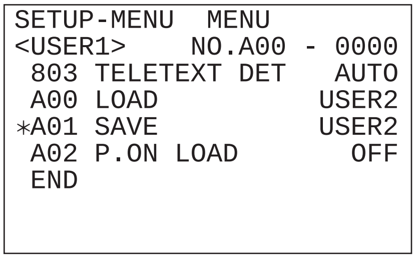
8. Press the SET button. The USER1 settings are now stored in the memory.
   If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Saving a user file

1. Press the MENU button.

2. While holding down the STAND BY button, press the REW or FF button, and select USER1.

3. Turn the search dial and move the cursor (∗) on the menu screen to setup item No. A01 (SAVE).

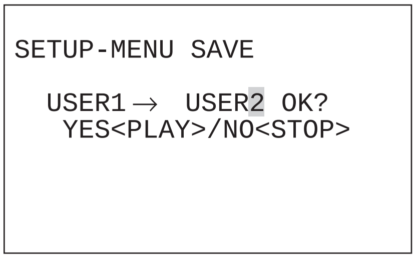


```
SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
 803 TELETEXT DET   AUTO
 A00 LOAD          USER2
∗A01 SAVE          USER2
 A02 P.ON LOAD       OFF
 END
```

4. While holding down the search button, turn the search dial and select the user file into which the USER1 contents are to be saved. User files which have been set to the lock mode are not displayed. When all the user files have been set to the lock mode, the “LOCKED” display appears and the contents cannot be saved.

5. Press the SET button. The following messages appear on the menu screen and counter display.

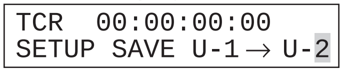
Menu screen



```
SETUP-MENU SAVE

  USER1 →  USER2 OK?
   YES<PLAY>/NO<STOP>
```

Counter display



```
TCR  00:00:00:00
SETUP SAVE U-1 → U-2
```

The user file number selected in step 4 is displayed in the shaded area.

6. Press the PLAY button. The contents of the USER1 file are saved in the user file which was selected in step 4 and stored in the memory. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.

7. Turn the search dial and move the cursor (∗) on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).

8. Press the SET button. The USER1 settings are now stored in the memory.
If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Automatic loading of user file when the power is turned on

When the user file to be loaded is selected in advance using setup menu item No. A02 (P.ON LOAD), it can be automatically loaded into USER1 when the power is turned on.

SYSTEM menu

<SYSTEM>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	SYS SC	0000 ⋮ 0127 ⋮ 0255	–127 ⋮ 0 ⋮ 128	System phase adjustment: Total variable range: ±180° or more –: Advanced +: Delayed **<Note>** If setting operation is performed, the setting value does not return to factory (default) setting.
01	SYS H	0000 ⋮ 0032 ⋮ 0060	–30 ⋮ 0 ⋮ 30	System phase adjustment: SC cycle phase (226 ns steps) –: Advanced +: Delayed **<Note>** If setting operation is performed, the setting value does not return to factory (default) setting.
02	VIDEO PHASE	0000 ⋮ 0032 ⋮ 0064	–32 ⋮ 0 ⋮ 32	Video phase adjustment: 148 ns steps –: C advanced +: C delayed
03	YC COARSE	0000 ⋮ 0002 ⋮ 0004	–2 ⋮ 0 ⋮ 2	YC timing rough adjustment: 148 ns steps –: C advanced +: C delayed
04	YC FINE	0000 ⋮ 0002 ⋮ 0004	–2 ⋮ 0 ⋮ 2	YC timing fine adjustment: 37 ns steps –: C advanced +: C delayed (The digital OUT option YC does not change.)
05	SCH COARSE	0000 0001 0002 0003	0 90 180 270	SCH phase adjustment: 90° units (The S and C phases change but the H phase does not change.)
06	SCH FINE	0000 ⋮ 0128 ⋮ 0255	–124 ⋮ 0 ⋮ 123	SCH phase adjustment: Total variable range: ±45° or more (The S and C phases change but the H phase does not change.)
07	PB OUT LV	0000 ⋮ 0124 ⋮ 0247	–124 ⋮ 0 ⋮ 123	Component PB output level adjustment: Total variable range: ±3 dB
08	PR OUT LV	0000 ⋮ 0124 ⋮ 0247	–124 ⋮ 0 ⋮ 123	Component PR output level adjustment: Total variable range: ±3 dB

The underline on the setting item denotes the initial setting.

SYSTEM menu

<SYSTEM> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
10	AV PHASE	0000 ⋮ 0128 ⋮ 0255	–128 ⋮ 0 ⋮ 127	This adjusts the audio output phase with respect to the video output: 20.8 µs steps –: The audio output phase is advanced with respect to the video output. +: The audio output phase is delayed with respect to the video output.
20	SYS H RANGE	0000 0001	FULL FINE	This selects the adjustable range for SYSTEM H during when the ENCODER REMOTE is connected. 0: ±6.7 µ sec (±30 steps) 1: –1.5 to +2.2 µ sec (–7 to +10 steps) **<Note>** If setting operation is performed, the setting value does not return to factory (default) setting.
21	SYS H OFFSET	0000 0001 0002 0003 0004 0005 0006 0007 0008	–4 –3 –2 –1 0 1 2 3 4	System phase adjustment: 3.62 µs steps 0: –14.5 µ sec 1: –10.8 µ sec 2: –7.23 µ sec 3: –3.62 µ sec 4: 0 sec 5: +3.62 µ sec 6: +7.23 µ sec 7: +10.8 µ sec 8: +14.5 µ sec **<Note>** Factory settings will remain unchanged even if an attempt is made to perform a setting operation.
30	MENU LOCK	0000 0001	OFF ON	This selects whether the system file lock mode is to be engaged or released. 0: The lock is released (file data can be changed). 1: The lock is engaged (file data cannot be changed).

The underline on the setting item denotes the initial setting.

USER menu

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ⋮ 0005 ⋮ 0015	0S ⋮ 5S ⋮ 15S	This sets the preroll time which can be set from 0 to 15 seconds in 1-second increments. **<Note>** When the unit is set to automatic editing [PREVIEW, AUTO EDIT], the unit will not operate if the preroll time is set to 0 seconds.
001	CHARA H-POS	0000 ⋮ 0005 ⋮ 0011	0 ⋮ 5 ⋮ 11	This sets the position of the characters on the horizontal plane for the time code and other super displays output to the VIDEO OUT 3 connector. **<Notes>** 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3 according to the status set in the menu. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
002	CHARA V-POS	0000 ⋮ 0023 ⋮ 0028	0 ⋮ 23 ⋮ 28	This sets the position of the characters on the vertical plane for the time code and other super displays output to the VIDEO OUT 3 connector. **<Notes>** 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3 according to the status set in the menu. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
003	DISPLAY SEL	0000 0001 0002 0003 0004 0005 0006	TIME T&STA T&S&M T&RT T&YMD T&MDY T&DMY	This is used to select what is to appear as the time code or other superimposed display at the VIDEO OUT 3 connector. 0: Time only 1: Time and operating status 2: Time, operating status and mode 3: Time and recording time 4: Time and recording date (year/month/day) 5: Time and recording date (month/day/year) 6: Time and recording date (day/month/year) **<Notes>** • "DVCPRO MODE," "DV MODE" or "DVCAM MODE" is displayed as the mode when a DVCPRO, DV or DVCAM format tape is used, respectively. • When setting 2 (T&S&M) is used, an error message will appear when a warning or error has occurred. • The recording time and recording date are displayed only when a DV or DVCAM format tape is played back. The operating status is displayed when a DVCPRO format tape is played back.

The underline on the setting item denotes the initial setting.

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
004	LOCAL ENA	0000 0001 0002	DIS ST&EJ ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All buttons except for the RECORDER and PLAYER buttons can be operated.
005	TAPE TIMER	0000 0001	±12h 24h	This selects the 12 or 24 hour display for the CTL counter. 0: 12 hour display 1: 24 hour display
006	SUPER	0000 0001	OFF ON	This selects whether the time code and other super display which are output to the VIDEO OUT 3 connector is to shown. 0: Not shown. 1: Shown.
007	CHARA TYPE	0000 0001	WHITE W/OUT	This selects the display type for the super display output to the VIDEO OUT 3 connector as well as for displays such as the setting menu, etc. 0: White characters against a black background. 1: White characters with a black border.
008	REMAIN SEL	0000 0001	OFF ON	This selects whether the remaining tape time is shown on the front panel. 0: Not shown. 1: Shown. When “T&S&M” is selected as the setup menu item No. 003 (DISPLAY SEL) setting, the remaining tape time is displayed on the third line of the VIDEO OUT 3 connector superimposed display in place of the mode display. **<Note>** Even when “1” (ON) is selected, the remaining tape time is not shown while the unit is calculating the remaining tape time after ejecting or inserting the cassette.
009	SETUP NUMBER	0000 0001	OFF ON	This selects whether the SETUP-MENU No. is displayed on the front panel. 0: The SETUP-MENU No. is not displayed. 1: The SETUP-MENU No. is displayed.
010	MONI CONTROL	0000 0001	MANU AUTO	This sets whether the recorder is to be forcibly set to the EE mode and the player’s playback signals are to be output to the monitor by pressing the recorder’s PLAYER button when a monitor has been connected only to the recorder during deck-to-deck editing. 0: The recorder is not forcibly set to the EE mode. 1: The recorder is forcibly set to the EE mode, and the player’s playback signals are output.

The underline on the setting item denotes the initial setting.

USER menu

<OPERATION>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
100	SEARCH ENA	0000 0001	DIAL KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	0000 0001 0002	×16 ×32 ×60	This sets the maximum speed for shuttle operations. 0: 16× normal speed 1: 32× normal speed 2: 60× normal speed **<Note>** During DV or DVCAM format, the maximum speed is 32× normal speed even when 60× is selected.
102	FF. REW MAX	0000 0001 0002	×32 ×60 ×100	This sets the maximum speed for FF and REW operations. 0: 32× normal speed 1: 60× normal speed 2: 100× normal speed **<Note>** During DV or DVCAM format, the maximum speed is 32× normal speed regardless of this setting.
103	AUDIO MUTE	0000 0001	OFF ON	This sets the status until the audio signal is output when operation switches from the stop or search modes to the play mode. 0: The time until the audio is output is shortened. 1: The audio is output after the status stabilizes. **<Note>** When set to 0 (OFF), the sound in the initially output part is incomplete. Therefore, this setting is not recommended for broadcasts.
104	REF ALARM	0000 0001	OFF ON	This selects whether to warn the operator when the REF.VIDEO signal has not been connected. 0: Warning is not given. 1: Warning is given by the flashing STOP lamp.
105	AUTO EE SEL	0000 0001 0002	S/F/R STOP BLACK	This selects the VTR mode in which the EE status is established when the TAPE/EE switch is set to EE. 0: EE status is established in the STOP, FF or REW mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 1: EE status is established only in the stop mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 2: EE status is established only in the stop mode. However, depending on TAPE/EE switch setting EJECT mode is as follows: TAPE/EE switch EE: EE status TAPE/EE switch TAPE: BLACK status for video MUTE status for audio
106	PLAY DELAY	0000 ⋮ 0015	0 ⋮ 15	This set the play delay time in frame increments.
107	CAP.LOCK	0000 0001	4F 8F	This selects the capstan lock mode when the CF switch at the bottom of the front panel is at 8F/4F. 0: 4F mode 1: 8F mode

The underline on the setting item denotes the initial setting.

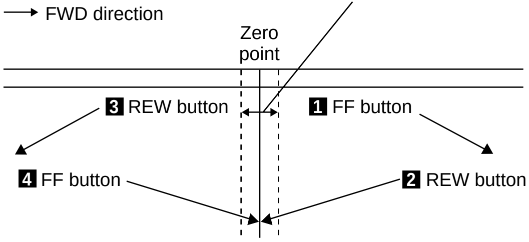
USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
108	FORMAT SEL	0000 0001 0002	DVCPRO DV DVCAM	These settings are for selecting the format when an L cassette or S cassette is used. 0: L cassette → DVCPRO mode S cassette → DV mode 1: L cassette/S cassette → DV mode 2: L cassette/S cassette → DVCAM mode **<Notes>** Bear in mind that, in addition to problems with playback, the trouble described below may occur when a tape which does not match the selected format is inserted. 1. If a DV or DVCAM tape is inserted when the DVCPRO mode setting has been selected, the recording operation will be conducted but no guarantee is given for the resulting performance, etc. Conversely, recording is not possible if a DVCPRO cassette tape is inserted when the DV or DVCAM mode setting has been selected. 2. The REMAIN display fails to appear properly. 3. The slow-down position near the tape start or end is not located accurately. 4. When a tape which does not match the selected format is inserted, no guarantee is given for the resulting performance, etc.
112	AUTO REW	0000 0001	OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end is detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.
113	MEMORY STOP	0000 0001	OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches "0" during a fast forwarding or rewinding operation in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. **<Notes>** 1. The stop mode concerned is either the stop or the still-picture (SHTL STILL) mode depending on the setup menu No. 313 (AFTER CUE-UP) setting. 2. When both the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.

The underline on the setting item denotes the initial setting.

Memory stop function



The MEMORY STOP function does not work if it is activated within a range of 0 ±2 frames.

❶ When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.

❷ When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."

❸ When the REW button is pressed, the VTR performs the regular rewinding operation since the zero point is not located in the direction of operation.

❹ When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads "0."

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
115	STOP RESPNS	0000 0001	NORMAL QUICK	This selects the response when the mode is changed to STOP/STILL while the tape is travelling. 0: Priority is given to the output picture. 1: Priority is given to the response. **<Notes>** • At the 1 (QUICK) setting, the picture may not be as clear in the STOP/STILL mode as it would be at the 0 (NORMAL) setting. • CTL may shift by ±2 frames.
116	EE MODE SEL	0000 0001	NORMAL THRU	This selects the output signals in the EE mode. 0: Signals which are delayed by an amount equivalent to the time taken for the internal digital signal processing are output. 1: The signals are output without internal digital signal processing. **<Notes>** • The NORMAL setting is forcibly selected for the internal operation when the editing mode is selected, when SDTI is set as the video input signal selection or when INT SG is selected for the video or audio signals. • Use the signals which are output in the EE mode for monitoring purposes.
117	FRZ MODE SEL	0000 0001 0002	DIS STBOFF SOF&EJ	This selects the output pictures from the playback pictures in the STANDBY OFF mode and EJECT mode. 0: The video output is muted. 1: The playback picture is frozen at the moment when the STANDBY OFF mode was established, and output. 2: The playback picture is frozen at the moment when the STANDBY OFF mode and EJECT mode were established, and output. **<Notes>** • The status in the freeze mode follows the setting for setup menu No. 608 (FREEZE SEL). • In the EJECT mode, freeze pictures are output only when 2 (BLACK) is used as the setup menu No. 105 (AUTO EE SEL) setting.

The underline on the setting item denotes the initial setting.

USER menu

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	0000 0001	DIS ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: No operation in synchronization 1: Operation in synchronization **<Note>** When operating two or more VTRs in synchronization, set item 200 of all the VTRs to 0001.
201	9P SEL	0000 0001	OFF ON	This selects whether the 9P connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Do not function 1: Function
202	ID SEL	0000 0001	OTHER DVCPRO	This selects the ID information which is returned to the controller. 0: 21 25H 1: DVCPRO's, own ID is returned (F1 33H).
203	25P SEL	0000 0001	OFF ON	This selects whether the PARALLEL (25P) connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Does not function 1: Functions
204	RS232C SEL	0000 0001	OFF ON	These settings are for selecting whether the RS-232C connector is to function when the REMOTE/LOCAL switch is set to REMOTE. 0: Connector does not function. 1: Connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 0005	300 600 1200 2400 4800 9600	These settings are for selecting the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 0001	7 8	These settings are for selecting the RS-232C data length. (Unit: bit)
207	STOP BIT	0000 0001	1 2	These settings are for selecting the RS-232C stop bit length. (Unit: bit)
208	PARITY	0000 0001 0002	NON ODD EVEN	These settings are for selecting the none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. 1: An odd number of bits is used for the parity system. 2: An even number of bits is used for the parity system.
209	RETURN ACK	0000 0001	OFF ON	These settings are for selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	0000 0001	OFF/ON ON	This selects the method used to detect the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time active signals are detected, the STANDBY ON or STANDBY OFF mode is selected alternately. 1: When active signals are detected in the STANDBY OFF mode, the unit is transferred to the STANDBY ON mode. No effect is exerted on operation while the STANDBY ON mode is established.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
301	IN/OUT DEL	0000 0001	MANU AUTO	This selects the operation to be performed when an edit point has been set incorrectly (when the OUT point is before the IN point). 0: Editing is not executed unless the illegal edit point is cleared or set again properly. 1: The edit points already input are automatically cleared.
302	NEGA FLASH	0000 0001	OFF ON	This selects whether to show a negative display when the IN point is greater than the OUT point. 0: No negative display. 1: Negative display.
303	STD/ NON-STD	0000 0001 0002	AUTO STD N-STD	This selects STD or NON-STD in accordance with the composite input signal. 0: Standard/non-standard signals are automatically identified and processed. 1: Standard signals are processed. (Forced STD) 2: Non-standard signals are processed. (Forced NON-STD)
304	SERVO REF	0000 0001	AUTO EXT	This selects the video signal processing. 0: Servo is synchronized with the input signal during recording and editing, or with the REF signal during playback. 1: Servo is synchronized at all times with the REF signal.
305	EDIT RPLCE1	0000 0001 0002 0003	N-DEF CH1 CH2 CH1+2	This sets the channel assignments for the controller's analogue audio preset when editing the digital audio of the VTR using a controller which does not have a digital audio edit preset control function. This selects the channel concerned when the VTR CH1 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
306	EDIT RPLCE2	0000 0001 0002 0003	N-DEF CH1 CH2 CH1+2	This selects the channel concerned when the VTR CH2 edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.
307	EDIT RPLCEC	0000 0001 0002 0003	N-DEF CH1 CH2 CH1+2	This selects the channel concerned when the VTR CUE edit preset is set in compliance with the ON or OFF presetting for the analogue audio signals designated by the editor or controller. 0: Not set. 1: Compliance with analogue CH1 edit preset. 2: Compliance with analogue CH2 edit preset. 3: Compliance with either analogue CH1 or CH2 edit preset.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
308	CONFI EDIT	0000 0001	OFF ON	This selects whether to conduct simultaneous playback while editing is in progress. 0: No simultaneous playback 1: Simultaneous playback **<Note>** Simultaneous playback is valid when the TAPE/EE switch is set to TAPE.
309	AUD EDIT IN	0000 0001	CUT FADE	This selects the connection method for the digital audio edit IN point. 0: Cut processing 1: V Fade processing
310	AUD EDIT OUT	0000 0001	CUT FADE	This selects the connection method for the digital audio edit OUT point. 0: Cut processing 1: V Fade processing
311	AUTO ENTRY	0000 0001	DIS ENA	This selects whether the IN point is to be entered using the PREROLL button when it has not been entered. 0: IN point is not entered. 1: IN point is entered.
312	CF ADJ SEL	0000 0001	PLAYER RECORD	This selects the CF adjustment deck with deck-to-deck editing. 0: The player's edit IN/OUT points are adjusted. (reference as the RECORDER side) 1: The recorder's edit IN/OUT points are adjusted. (reference as the PLAYER side)
313	AFTER CUE-UP	0000 0001	STOP STILL	This selects the mode after cue-up operation is complete. 0: STOP mode 1: SHTL STILL mode
316	VAR STEP	0000 0001	FINE COARSE	This selects the VAR speed during remote control operations. 0: The tape is played at the fine step speed. 1: The tape is played at a speed at which noise-less playback is possible in the –0.43× to +1× (–0.5× to +1×) range. **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • At the 1 (COARSE) setting, the phase cannot be synchronized from the editing controller.
317	VAR FWD MAX	0000 0001 0002 0003 0004 0005 0006 0007 0008	+4.1 +1.85 +1 +0.75 +0.5 +0.3 +0.2 +0.1 +0.03	This sets the maximum VAR FWD speed. 0: +4.1× (+3.1×) speed 1: +1.85× (+1.85×) speed 2: +1× (+1×) speed 3: +0.75× (+0.5×) speed 4: +0.5× (+0.5×) speed 5: +0.3× (+0.3×) speed 6: +0.2× (+0.2×) speed 7: +0.1× (+0.1×) speed 8: +0.03× (+0.03×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • In the DV/DVCAM mode, the maximum speed is set to +1× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1), the phase cannot be synchronized from the editing controller.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
318	VAR REV MAX	0000 0001 0002 0003 0004 0005 0006 0007	–4.1 –1.85 –1 –0.43 –0.3 –0.2 –0.1 –0.03	This sets the maximum VAR REV speed. 0: –4.1× (–3.1×) speed 1: –1.85× (–1.85×) speed 2: –1× (–1×) speed 3: –0.43× (–0.5×) speed 4: –0.3× (–0.3×) speed 5: –0.2× (–0.2×) speed 6: –0.1× (–0.1×) speed 7: –0.03× (–0.03×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • In the DV/DVCAM mode, the maximum speed is set to –0.5× when the dial on the front panel is operated.
319	JOG STEP	0000 0001	FINE COARSE	This selects the JOG speed during remote control operations. 0: The tape is played at the fine step speed. 1: The tape is played at a speed at which noise-less playback is possible in the –0.43× to +1× (–0.5× to +1×) range. **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • At the 1 (COARSE) setting, the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
320	JOG FWD MAX	0000 0001 0002	+4.1 +1.85 +1	This sets the maximum JOG FWD speed. 0: +4.1× (+3.1×) speed 1: +1.85× (+1.85×) speed 2: +1× (+1×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • The maximum speed is set to +1× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1), the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
321	JOG REV MAX	0000 0001 0002 0003	–4.1 –1.85 –1 –0.43	This sets the maximum JOG REV speed. 0: –4.1× (–3.1×) speed 1: –1.85× (–1.85×) speed 2: –1× (–1×) speed 3: –0.43× (–0.5×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • When the dial on the front panel is operated, the maximum speed is set to –1× in the DVCPRO mode and to –0.5× in the DV/DVCAM mode.

The underline on the setting item denotes the initial setting.

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
322	AUD MEM MODE	0000 0001 0002 0003 0004	OFF AMU_X AMU_VO INT_X INT_VO	This selects whether the voice-over or audio cross channel editing which is to be performed using the AJ-YA752 audio memory unit or internal audio memory. 0: Neither voice-over nor audio cross channel editing is performed 1: Audio cross channel editing is performed using the AJ-YA752 audio memory unit. 2: Voice-over editing is performed using the AJ-YA752 audio memory unit. 3: Audio cross channel editing is performed using the internal audio memory. 4: Voice-over editing is performed using the internal audio memory. **<Notes>** • The RS-232C interface will not function with the 1 (AMU_X) or 2 (AMU_VO) setting. • Refer to the instruction manual of the AJ-YA752 audio memory unit for details on how to use each mode using this unit.
323	AUD MEM CH	0000 0001	CH1 CH2	This sets the channel for the voice-over or audio cross channel editing which is performed using the AJ-YA752 audio memory unit or internal audio memory. 0: The signals are recorded onto CH1. 1: The signals are recorded onto CH2. **<Note>** This setting has no effect when AMU_VO has been selected as the setup menu No. 322 (AUD MEM MODE) setting.
324	POSTROLL TM	0000 0001 0002 0003 0004 0005	0s 1s 2s 3s 4s 5s	This sets the postroll time. Any time from 0 to 5 seconds can be set in 1-second units.

The underline on the setting item denotes the initial setting.

USER menu

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000 0001 0002 0003 0004 0005 0006 0007 0008	0.5s 5s 10s 20s 30s 40s 50s 1min 2min	This selects the time to be taken until the unit goes into the tape protection mode when it is left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) **<Note>** With the DV or DVCAM format, the maximum time which can be set is 10 s even when a setting above 10 s has been selected. The selection screen, however, will operate for up to 2 minutes.
401	SRC PROTECT	0000 0001	STEP HALF	This selects the operation during the tape protection mode when the unit is left standing in the still status during the search mode (JOG/VAR/SHTL). 0: STEP FWD. 1: HALF LOADING. **<Note>** When STEP FWD is selected, the unit automatically goes into the HALF LOADING mode when the total time for which the unit is left standing in the still status reaches 30 minutes (DVCPRO) or 1 minute (DV or DVCAM).
402	DRUM STDBY	0000 0001	OFF ON	This selects the drum operation in the STANDBY OFF mode. 0: The drum stops rotating. 1: The drum continues rotating.
403	STOP PROTECT	0000 0001	STEP HALF	This selects the operation in the tape protection mode when the unit has been left standing in the STOP mode. 0: STEP FWD 1: HALF LOADING **<Note>** When STEP FWD is selected, the unit is automatically transferred to the HALF LOADING mode when the total time during which it has been left standing in the STOP mode reaches 30 minutes (or 1 minute with a DV/DVCAM tape).

The underline on the setting item denotes the initial setting.

<Note>
In order to protect the tape and VTR helical heads, it is recommended that the Still Timer be set for automatic tape protection mode in 30 seconds or under.

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
500	VITC POS-1	0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015	7L 8L 9L 10L 11L 12L 13L 14L 15L 16L 17L 18L 19L 20L 21L 22L	This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-2 in 501 cannot be selected.)
501	VITC POS-2	0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010 0011 0012 0013 0014 0015	7L 8L 9L 10L 11L 12L 13L 14L 15L 16L 17L 18L 19L 20L 21L 22L	This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-1 in 500 cannot be selected.)
502	VITC BLANK	0000 0001	BLANK THRU	This selects whether to output the VITC data to the positions selected by VITC POS-1 in 500 and VITC POS-2 in 501. 0: Data is not output. 1: Data is output.
503	TCG REGEN	0000 0001 0002	TC&UB TC UB	This selects the signal to be regenerated when the time code generator (TCG) in the REGEN mode. 0: Both the time code and user bit are regenerated. 1: Only the time code is regenerated. 2: Only the user bit is regenerated.
504	REGEN MODE	0000 0001 0002 0003	AS&IN ASSEM INSRT SW	This selects whether the time code is to be regenerated during automatic editing using the unit's control panel. 0: Time code is regenerated with assemble or insert editing. 1: Time code is regenerated with assemble editing. 2: Time code is regenerated with insert editing. 3: Setting complies with REGEN/PRESET switch setting.
505	EXT TC SEL	0000 0001	LTC VITC	This selects the time code to be used when an external time code is to be used. 0: The LTC of the TIME CODE IN connector is used. 1: The video signal VITC is used.

The underline on the setting item denotes the initial setting.

USER menu

<TIME CODE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
506	BINARY GP	0000 0001 0002 0003 0004 0005 0006 0007	000 001 010 011 100 101 110 111	This sets the usage status of the user bit of the time code generated by the TCG. 0: NOT SPECIFIED (character set not specified) 1: ISO CHARACTER (8 bits character set based on ISO646, ISO2022) 2: UNASSIGNED 1 (undefined) 3: UNASSIGNED 2 (undefined) 4: UNASSIGNED 3 (undefined) 5: PAGE/LINE 6: UNASSIGNED 4 (undefined) 7: UNASSIGNED 5 (undefined)
507	PHASE CORR	0000 0001	OFF ON	This selects whether to control the phase correction of the LTC generated by the TCG. 0: Phase correction control is not performed. 1: Phase correction control is performed.
508	TCG CF FLAG	0000 0001	OFF ON	This selects whether the CF flag of the TCG is to ON. 0: CF flag is OFF. 1: CF flag is ON.
511	TC OUT REF	0000 0001	V OUT TC_IN	This is used to switch the phase of the time code, which is output from the TIME CODE OUT connector, for the external LTC input when the TC INT/EXT switch is at the EXT position. (In EE mode only) 0: Time code is synchronized with output video signal. 1: Time code is synchronized with external time code input.
512	VITC OUT	0000 0001	SBC VAUX	This selects how the VITC which is to be superimposed onto the output video signal is to be output. 0: During recording: The input time code, which was selected by the setup menu No. 505 (EXT TC SEL) setting and TC INT/EXT switch, is output as the VITC. During playback: The time code recorded in the SBC area is output as the VITC. 1: During recording: The time code detected from the input video signal is output as the VITC. During playback: The time code recorded in the VAUX area is output as the VITC. **<Note>** The time code detected from the input video signal is automatically recorded in the VAUX area while pictures are being recorded.

The underline on the setting item denotes the initial setting.

SBC (sub code data) area:
This area is separate from the video and audio data area on the helical track. The time codes complying with SMPTE/EBU standards, recording dates and times, and other tape control information are stored here. As with the conventional LTC (linear time code), the time code can be read even during rewinding or fast forwarding. It can also be read out when the tape has stopped.

VAUX (video auxiliary data) area:
This area is to be found in the video data area on the helical track. The additional information relating to the video data is stored here.

USER menu

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
601	INT BB SIG	0000 0001	OFF BB	This selects whether to generate the internal black burst signal. 0: Signal is not generated. 1: Signal is generated.
602	INPUT C KILL	0000 0001	B/W AUTO	This selects colour killer processing for the video input signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
603	OUT VSYNC	0000 0001	N-VF VF	This selects whether to float the vertical sync position of the video output in order to align the video output phase with the input in the EE/record/edit modes. 0: Signals are not floated. 1: Signals are floated.
604	V-MUTE SEL	0000 0001	N-MUTE LOW RF	This selects whether the video output signals are to be muted when the blank portion of the tape is detected during playback. 0: No muting. (Freeze) 1: Muting. (Set to gray.)
608	FREEZE SEL	0000 0001	FIELD FRAME	This selects the freeze mode for still pictures. 0: Field freeze. 1: Frame freeze. **<Note>** When frame freeze has been selected, the frame slow status is established with the slow setting.
610	OUT C KILL	0000 0001	B/W COLOUR	This selects chroma colour killer processing for the video output signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
611	EDH	0000 0001	OFF ON	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed. **<Note>** This item is valid when the optional serial interface board has been installed.
617	INTER-POLATE	0000 0001	OFF AUTO	Although vertical interpolation is performed automatically during slow-motion playback and the vertical motion of the playback picture is reduced, this menu item enables the interpolation operation to be forcibly turned off. 0: The interpolation operation is forcibly turned off. 1: The interpolation operation is automatically turned on during slow-motion playback.

The underline on the setting item denotes the initial setting.

USER menu

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
700	CH1 IN LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio input (CH1) reference level switching.
701	CH2 IN LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio input (CH2) reference level switching.
702	CUE IN LV	0000 0001 0002 0003	4dB 0dB -20 dB -20 dB	This selects the CUE input reference level switching.
703	CH1 OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio output (CH1) reference level switching.
704	CH2 OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio output (CH2) reference level switching.
705	CUE OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the CUE output reference level switching.
706	MONIL OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio monitor output (Lch) reference level switching.
707	MONIR OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio monitor output (Rch) reference level switching.
708	MONI OUT	0000 0001	UNITY VAR	This selects the audio monitor output volume UNITY/VARIABLE reference switching. 0: The volume is output at the preset value. 1: The volume is linked with the headphones volume control.
709	EMPHASIS	0000 0001	OFF ON	This sets the emphasis ON or OFF.
710	CH1 IN SEL	0000 0001	ANA DIGI	This selects the CH1 input when USER SET has been selected by pressing the unit’s AUDIO input selector switch. 0: Analogue input. 1: Digital input.
711	CH2 IN SEL	0000 0001	ANA DIGI	This selects the CH2 input when USER SET has been selected by pressing the unit’s AUDIO input selector switch. 0: Analogue input. 1: Digital input.
712	DIGI IN SEL	0000 0001 0002	AES SIF1_2 SIF3_4	This selects the CH1 and CH2 digital input when USER SET has been selected by the unit’s AUDIO input selector switch. 0: AES. 1: Serial I/F 1 and 2. 2: Serial I/F 3 and 4. **<Note>** Selections 1 and 2 are selected when the serial option is mounted.

The underline on the setting item denotes the initial setting.

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
713	MONI CH SEL	0000 0001 0002	MANU AUTO1 AUTO2	This selects the monitor output. 0: The output is as selected in MONITOR SELECT. 1: The output defaults to CUE except when speed factor is between –0.43× and 1×, inclusive, in which case output is PCM AUDIO. 2: The output defaults to CUE except in PLAY mode, in which case output is PCM AUDIO. **<Note>** These menu settings are valid when CH1 or CH2 has been selected by the MONITOR SELECT L/R switches on the front panel. (When CUE has been selected, the CUE signal will be output at all speeds regardless of the above menu setting.)
714	REC CH1	0000 0001 0002	CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH1 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
715	REC CH2	0000 0001 0002	CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH2 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
716	REC CUE	0000 0001 0002 0003	CUE CH1 CH2 CH1+2	This selects the input signal recorded in CUE. 0: CUE input 1: The signal selected in Setup Menu No. 714 is recorded. 2: The signal selected in Setup Menu No. 715 is recorded. 3: A mixed signal of the signals selected in Setup Menu No. 714 and Setup Menu No. 715 is recorded.
718	DV OUTPUT	0000 0001 0002	ST1 ST2 ST1+2	This selects the AUDIO CH1 and CH2 output signals during DV or DVCAM format playback. 0: The CH1 track signals are output to CH1 and the CH2 track signals to CH2. 1: The CH3 track signals are output to CH1 and the CH4 track signals to CH2. 2: The mixed CH1 and CH3 track signals are output to CH1 and the mixed CH2 and CH4 track signals to CH2. **<Note>** This item setting is valid only when the tape recorded on the four channels of the DV or DVCAM format is played back.
719	PB FADE	0000 0001 0002	AUTO CUT FADE	This selects the processing method for the audio edit points (IN point, OUT point) during playback. 0: According to the status during recording. 1: Forced CUT 2: Forced FADE
720	EMBEDDED AUD	0000 0001	OFF ON	This selects whether to superimpose the audio data onto the serial output. 0: Data is not superimposed. 1: Data is superimposed. **<Note>** This item is valid when the optional serial interface board has been installed.
722	INT SG	0000 0001	OFF ON	This selects whether to use the internal signals as the audio input signals. 0: The internal signals are not selected. 1: The internal signals are selected. **<Note>** The internal signals have a frequency of 1 kHz.

The underline on the setting item denotes the initial setting.

USER menu

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
723	DV PB ATT	0000 0001	OFF ON	This selects the audio output level for DV or DVCAM format playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced). **<Notes>** As indicated below, whether the setting takes effect or not depends on the size of the cassette tape used. 1. When an “L” size cassette is used The setting takes effect only when “DV” or “DVCAM” has been selected as the setting for setup menu No. 108 (FORMAT SEL). 2. When an “M” size cassette is used The setting does not take effect. 3. When an “S” size cassette used The setting takes effect.
724	MONI SEL INH	0000 0001	OFF ON	This selects whether to allow (enable) or prohibit (disable) the operation of the MONITOR SELECT and MONITOR SET buttons on the front panel. 0: The buttons can be operated. 1: Operation of the buttons is prohibited.
725	CUE SLOW	0000 0001	STEP LINEAR	This selects the tape travel status (CUE track playback status) during SLOW playback. 0: Priority is given to the output picture, and tape travel is set to the step feed status. 1: Priority is given to CUE track playback, and the tape travel is set to the linear status. **<Notes>** When “1” (LINEAR) has been set: • It may not be possible to achieve as clear a picture as in the STEP mode. • The CTL counter may not operate properly.
726	CUE OUT	0000 0001	NORMAL DIRECT	This selects the output signals from the CUE OUT connector. 0: The timing is aligned with the output picture. 1: The signals recorded on the tape are output with no delay. **<Note>** When “1” (DIRECT) has been set, the output picture and CUE output timing will differ.
727	MONI MIX L	0000 0001	OFF CH1+2	This enables mixed signals to be selected for the monitoring through the headphones. 0: The signals are not mixed. 1: The CH1 and CH2 signals are mixed and output to the left channel.
728	MONI MIX R	0000 0001	OFF CH1+2	This enables mixed signals to be selected for the monitoring through the headphones. 0: The signals are not mixed. 1: The CH1 and CH2 signals are mixed and output to the right channel.
729	REC PT MUTE	0000 0001	OFF ON	This selects whether to mute the sound at the joins in the recording during playback in the DV or DVCAM format. 0: The sound is not muted. 1: The sound is muted.
730	CUE OUT SEL	0000 0001	OFF ON	This selects whether the cue signal is to be output to the main line system output in the search mode. 0: The cue signal is not output. 1: The cue signal is output. (This applies only when a setting other than MANU has been selected for setup menu item No. 713 (MONI CH SEL).)

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
800	ADD LINE	0000 0001 0002 0003 0004 0005 0006 0007 0008	OFF YC422 YC411 Y1_B/W Y1_BPF C1 Y2_B/W Y2_BPF C2	This selects the mode in which the input signals are recorded on additional lines. 0: No additional line recording. 1: For 1-line recording of the input signals in the 422 mode. 2: For 1-line recording of the input signals in the 411 mode. 3: For the 1-line recording of input signals in their original form as the luminance signal. 4: For the 1-line recording of only the luminance signal after the input signals have been separated into the luminance and chrominance signals. 5: For the 1-line recording of only the chrominance signal after the input signals have been separated into the luminance and chrominance signals. 6: For the 2-line recording of input signals in their original form as the luminance signal. 7: For the 2-line recording of only the luminance signal after the input signals have been separated into the luminance and chrominance signals. 8: For the 2-line recording of only the chrominance signal after the input signals have been separated into the luminance and chrominance signals. **<Notes>** • When a setting from 1 to 8 is selected and the STOP button is pressed, operation moves to the sub screen and the recording line or lines can be selected. Press the STOP button again to return from the sub screen. • Depending on the additional line recording mode, the number of lines for recording teletext will differ.
Sub screen				
00	REC LINE	0000 ⋮ 0015 0016 ⋮ 0030 0031	7L ⋮ 22L 320L ⋮ 334L 623L	For selecting the additional line where the signals are to be recorded.
01	REC LINE2	0000 ⋮ 0015 0016 ⋮ 0018 ⋮ 0030 0031	7L ⋮ 22L 320L ⋮ 322L ⋮ 334L 623L	For selecting the additional line where the signals are to be recorded. **<Note>** This menu item is not displayed when a setting from 1 to 5 has been selected as the additional line mode.

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
803	TELETEXT DET	0000 0001 0002	OFF AUTO MANU	This selects the method used to detect the lines in which the teletext signals are to be recorded. 0: The teletext signals are not recorded. 1: The teletext signals are automatically detected and recorded. 2: The lines in which the teletext signals are to be recorded are selected and set. **<Notes>** • When setting “1 (AUTO)” is selected, it may not be possible to record the teletext signals in all the lines depending on the setting of setup menu item No. 800 (ADD LINE). • When setting “2 (MANU)” is selected and the STOP button is pressed, operation transfers to the sub-screen, and the number of recording lines can be selected. To return from the sub-screen, press the STOP button again. • The number of lines in which the teletext signals can be recorded depends on the setting of setup menu item No. 800 (ADD LINE).
Sub screen				
00	REC LINE1	0000	OFF	This selects the lines in which the teletext signals are to be recorded. Factory mode settings REC LINE1: OFF REC LINE2: OFF REC LINE3: OFF REC LINE4: OFF REC LINE5: OFF REC LINE6: OFF REC LINE7: OFF REC LINE8: OFF REC LINE9: OFF REC LINE10: OFF REC LINE11: OFF REC LINE12: OFF REC LINE13: OFF REC LINE14: OFF
:	:	0001	7&320	
:	:	0002	8&321	
:	:	0003	9&322	
:	:	0004	10&323	
:	:	0005	11&324	
:	:	0006	12&325	
:	:	0007	13&326	
:	:	0008	14&327	
:	:	0009	15&328	
:	:	0010	16&329	
:	:	0011	17&330	
:	:	0012	18&331	
:	:	0013	19&332	
:	:	0014	20&333	
:	:	0015	21&334	
13	REC LINE14	0016	22	
804	BLANK LINE	0000 0001 0002	BLANK THRU MANU	This selects blanking ON or OFF for the vertical blanking period of the video signals. 0: Blanking is effected forcibly for all lines. 1: No blanking is effected for any of the lines. 2: Blanking ON or OFF is selected for each line. **<Note>** When setting “2 (MANU)” is selected and the STOP button is pressed, operation transfers to the sub-screen, and ON or OFF can be selected for each line. To return from the sub-screen, press the STOP button again.

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub screen				
00	LINE 7&320	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 8&321	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 9&322	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 10&323	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 11&324	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 12&325	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 13&326	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 14&327	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 15&328	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 16&329	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 17&330	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 18&331	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
12	LINE 19&332	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
13	LINE 20&333	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
14	LINE 21&334	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
15	LINE 22&335	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

USER menu

<MENU>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	0000 0001 0002 0003	USER2 USER3 USER4 USER5	This selects the user file whose contents will be loaded into USER1. 0: The USER2 file contents are loaded. 1: The USER3 file contents are loaded. 2: The USER4 file contents are loaded. 3: The USER5 file contents are loaded. **<Note>** When the SET button is pressed after loading, the setting will be stored in the memory. When the MENU button is pressed, the setting will not be changed.
A01	SAVE	0000 0001 0002 0003 0004	USER2 USER3 USER4 USER5 LOCKED	This selects the user file into which the USER1 settings will be saved. 0: The settings are saved in USER2. 1: The settings are saved in USER3. 2: The settings are saved in USER4. 3: The settings are saved in USER5. 4: This display appears when all the user files are in the change prohibit status. **<Notes>** • User files whose status have been set to change prohibit cannot be selected. • When all the user files are in the change prohibit status, the “LOCKED” display appears and the contents cannot be saved.
A02	P.ON LOAD	0000 0001 0002 0003 0004	OFF USER2 USER3 USER4 USER5	This loads the contents of the selected user file into USER1 and it starts operation with the USER1 settings when the power is turned on. 0: Operation is started with the settings of the previously set user file. 1: The contents of USER2 are loaded into USER1 and operation is started with the USER1 settings. 2: The contents of USER3 are loaded into USER1 and operation is started with the USER1 settings. 3: The contents of USER4 are loaded into USER1 and operation is started with the USER1 settings. 4: The contents of USER5 are loaded into USER1 and operation is started with the USER1 settings.
A03	MENU LOCK	0000 0001	OFF ON	This selects whether to set or release the user file (USER2 – USER5) lock mode. 0: The lock is released (changes can be made). 1: The lock is set (changes are prohibited). **<Note>** The lock cannot be set for USER1.

The underline on the setting item denotes the initial setting.

<Notes>

- No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) are the menu items which can be set only for USER1. They are not displayed with the USER2 – USER5 files.
- No. A03 (MENU LOCK) is the menu item which can be set only for the USER2 – USER5 files. It is not displayed with USER1.

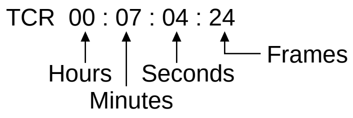
Time code/user bit

Time code

The time code is used when the time code signal generated by the time code generator (time code signal generator) is to be recorded on the tape, its values are to be read by the time code reader (time code signal reader), and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time code is written in the sub-code area (data area) of the helical track. This enables insert editing to be conducted independently using the time code alone. In addition, the VTR's playback speed can be read from the stop mode to slow-motion playback up to high-speed play (approx. 100X normal speed).

The time code values are indicated using the display and superimpose functions.



User bit

"User bit" refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users. It enables operator numbers values to be recorded.
The alphanumeric characters which can be used for the user bit are the figures 0 to 9 and the letters A to F.

<Note>
Time code and user's bit control during tape play is exercised by the data recorded in the SBC area. The data recorded in this area includes the data that appears on the display or is superimposed on the TV monitor screen and the communication data that is transferred to the editing controller.

Recording internal/external time codes

1. Setting the internal time code

1 Place the VTR in the stop mode.

2 Set the TC/CTL switch to TC.

3 Set the TC INT/EXT switch to INT. (Internal time code selected)

4 Set the REC RUN/FREE RUN switch position.

REC RUN: The time code runs at the same time as the recording proceeds.

FREE RUN: The time code runs in the same way as the time regardless of the VTR's operation.

5 Set the REGEN/PRESET switch position.

REGEN: Continuity is maintained with the recorded time code before editing. (Detailed settings are also possible using the menu settings. See the menu items below.)
Setup menu No. 503 (TCG REGEN)
Setup menu No. 504 (REGEN MODE)

PRESET: Recording starts from the value set with the TC SET button.

<Note>
During auto editing, REGEN will be selected by the setup menu No. 504 setting even if the switch has been set to the PRESET position.

6 Set the TC SET button.
Use the TC SET button to set the start number of the time code or user bit.

1. Press the SHIFT button.
   The leftmost digit flashes.

2. Press the ADJ button to change the value.
   Each time the button is pressed, the number changes. The setting range is given below.
   - **Time code**
     00:00:00:00 – 23:59:59:24
   - **User bit**
     00 00 00 00 – FF FF FF FF

3. Repeat steps 1 and 2 to change the value.

4. When the setting of the start number is completed, press the START button. In the FREE RUN mode, the time code now starts running.

5. Proceed with the recording or editing.

2. Setting the external time code (TC switch → EXT)

1 Place the VTR in the stop mode.

2 Set the TC/CTL switch to TC.

3 Set the TC INT/EXT switch to EXT. (External time code selected)

4 Setup menu No. 505 (EXT TC SEL) can be set as follows.

LTC: The LTC signal input to the TIME CODE IN connector (XLR) on the rear jack panel is recorded as the time code.
<Note> The LTC signal must be synchronized with the video signal.

VITC: The input video signal's VITC is recorded as the time code.

Reproducing the time code/user bit

1 Place the unit in the stop mode.

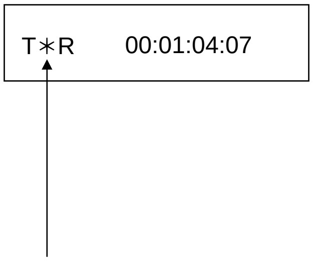
2 Set the TC/CTL button to TC.

3 Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.

- When it is no longer possible to read the time code, it is interpolated using the CTL signal.

4 Press the PLAY button.
Playback now commences, and the time code appears on the display.
When setup menu No. 006 (SUPER) is ON, the time code value is superimposed onto the video signal from the VIDEO OUT 3 connector.

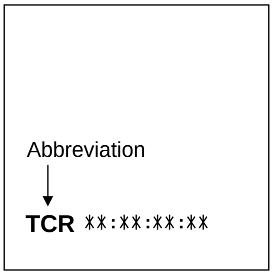
<Note>
When the time code signal cannot be read, the time code is automatically interpolated by the CTL signal.
The display appears as shown below.



When the time code signal cannot be read,
an asterix (∗) is displayed.

Superimpose screen

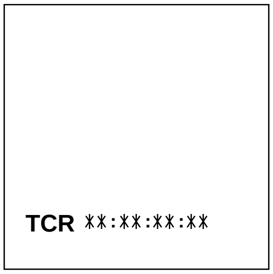
The control signals, time code, etc. are displayed using abbreviations.



TV monitor

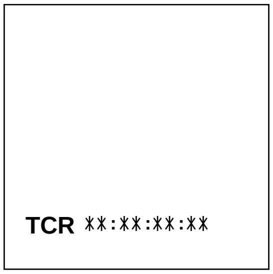
CTL = control signal
TCR = TC time code reading
UBR = TC user bit reading

Characters displayed
The background of characters superimposed on the display can be changed using setup menu No. 007 (CHARA TYPE).

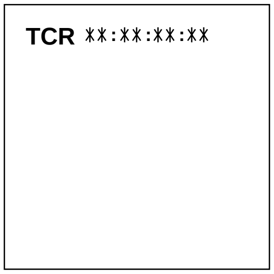


TV monitor

Display position
The position of the characters superimposed on the display can be changed using setup menus No. 001 (CHARA H-POS) and No. 002 (CHARA V-POS).

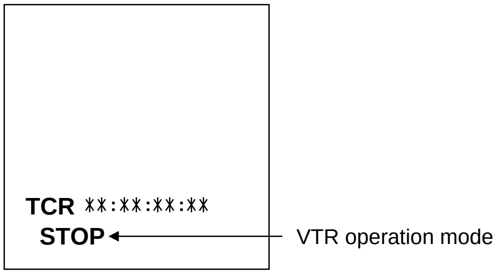


TV monitor



TV monitor

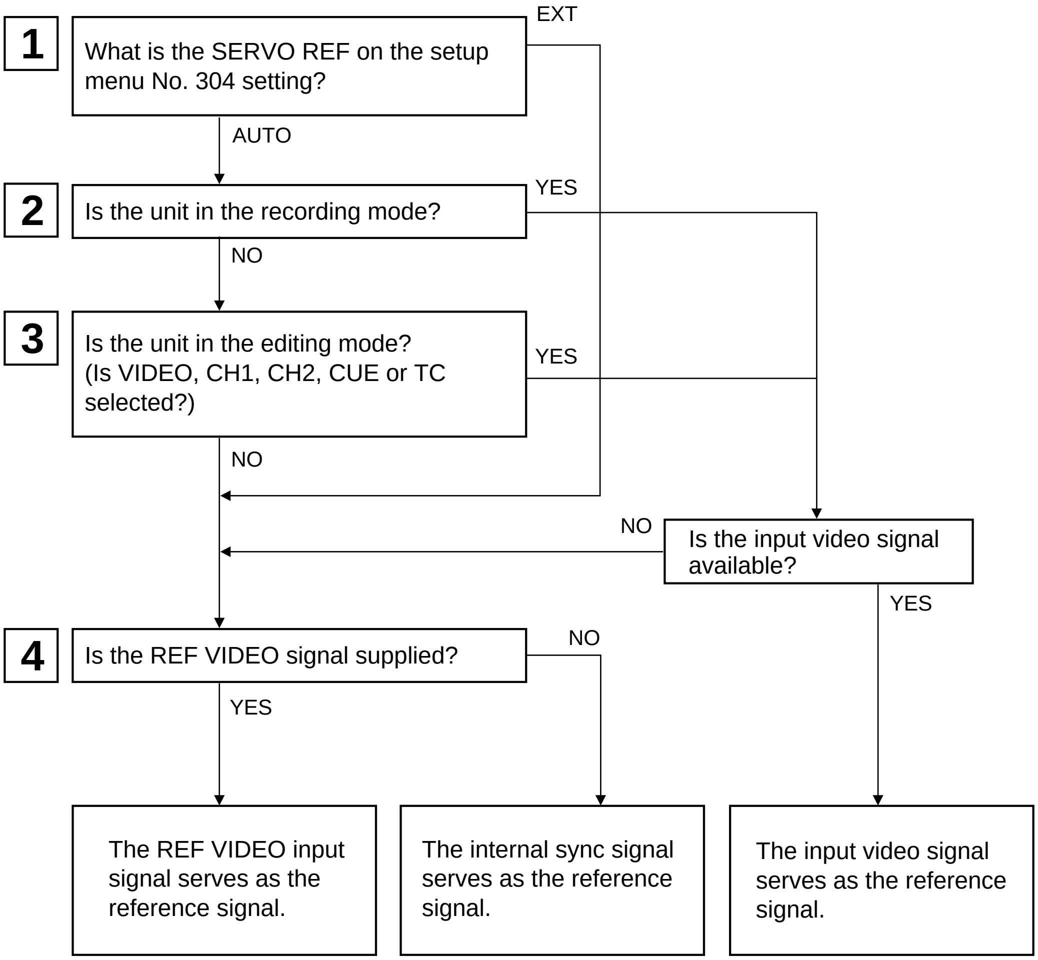
Operation mode
The VTR’s operation mode can also be displayed using setup menu No. 003 (DISPLAY SEL).



TV monitor

Servo reference

This unit automatically selects the input video signal selected by the INPUT switch, the reference video signal supplied from the REF VIDEO input connector or the internal sync signal as the servo reference signal.
When the signal is selected, the unit's mode and servo reference stand in the relationship shown in the flowchart presented below.


1
What is the SERVO REF on the setup menu No. 304 setting?
EXT
AUTO
2
Is the unit in the recording mode?
YES
NO
3
Is the unit in the editing mode? (Is VIDEO, CH1, CH2, CUE or TC selected?)
YES
NO
NO
Is the input video signal available?
YES
4
Is the REF VIDEO signal supplied?
NO
YES
The REF VIDEO input signal serves as the reference signal.
The internal sync signal serves as the reference signal.
The input video signal serves as the reference signal.

Servo reference setting tables

The servo reference signal is switched as shown in the tables below depending on the servo reference setting, deck mode and what input signal is available. When the mode is transferred to editing or recording/playback, the image may be disturbed and the transfer may be delayed if the references during playback and recording do not match.

■ During playback or special playback

SERVO REF on the setup menu No. 304 position	Input signal status		Reference signal (servo reference)
	VIDEO IN signal	REF IN signal	
AUTO	○	○	REF IN signal
	○	×	Internal sync signal
	×	○	REF IN signal
	×	×	Internal sync signal
EXT	○	○	REF IN signal
	○	×	Internal sync signal
	×	○	REF IN signal
	×	×	Internal sync signal

■ During recording or editing

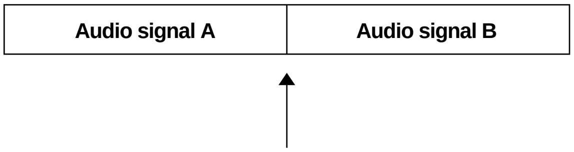
SERVO REF on the setup menu No. 304 position	Input signal status		Reference signal (servo reference)
	VIDEO IN signal	REF IN signal	
AUTO	○	○	VIDEO IN signal
	○	×	VIDEO IN signal
	×	○	REF IN signal
	×	×	Internal sync signal
EXT	○	○	REF IN signal
	○	×	Internal sync signal
	×	○	REF IN signal
	×	×	Internal sync signal

“○” denotes that the signal is supplied: “×” denotes that the signal is not supplied.

Audio V Fade Function

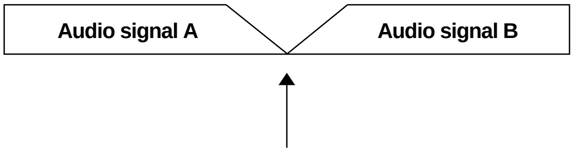
When editing tapes, the edit point splicing selection (setup menu No. 309 and 310) information is recorded on the tape. This information is then sensed during playback, and V fade or cut processing is automatically performed for these sections. [However, only when the playback fade selection (No. 719) is AUTO.]

When the edit point splicing selection (setup menu No. 309 and 310) is CUT



Noise appears at the edit splice.

When the edit point splicing selection (setup menu No. 309 and 310) is FADE

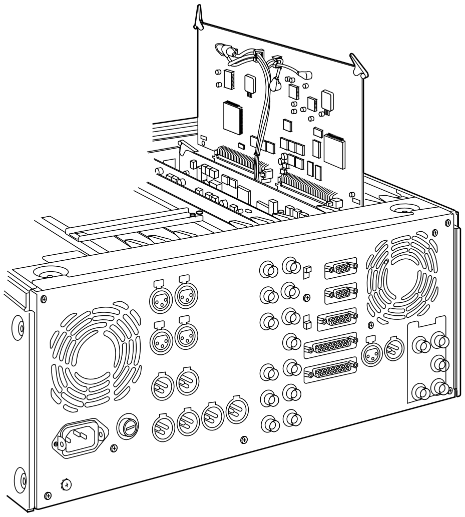


V fade is performed instantaneously to eliminate the noise.

<Notes>

- When the playback fade selection (No. 719) is CUT, cut processing is performed for all splices.
- When the playback fade selection (No. 719) is FADE, V fade processing is performed for all splices.

Printed circuit board



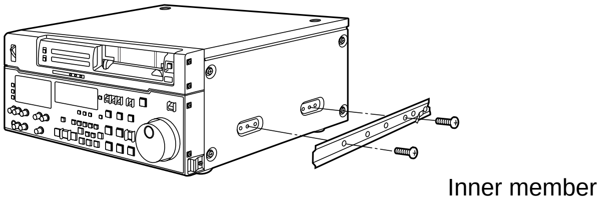
Printed circuit board	Abbr. name	Full name	Function	Factory setting
F8 board ADDA1	SW1	Audio Input Impedance SW	This sets the CH1 audio input impedance. HIGH/600Ω	HIGH
	SW41	Audio Input Impedance SW	This sets the CH2 audio input impedance. HIGH/600Ω	HIGH
H2 board CUE	SW101	Cue Input Impedance SW	This sets the CUE input impedance.	HIGH
F4 board	SW940	Component PB/PR Output level selector	This sets the component PB/PR output level when connecting with the editor. MII : MII level BETA : ß-CAM level	BETA

Rack mounting

The unit can be mounted into a 19-inch standard rack if the optional rack-mounting adaptors (AJ-MA75P) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3001-99-0400) of CHASSIS TRAK be used. (The complete slide rail and bracket unit is not available from Panasonic) For further details, consult with your dealer.

1 Remove the screws on the left and right sides of the unit.

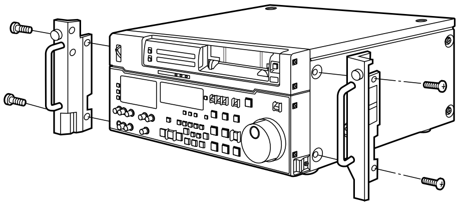
2 Use the removed screw to attach the inner members of the slide rails.



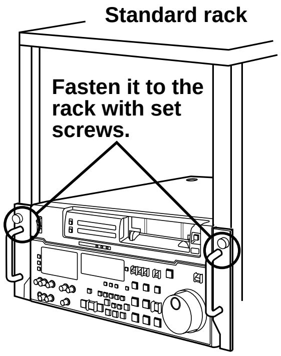
The length of the screws used is subject to restriction. If some of the mounting screws have been lost or misplaced, use screws which are less than 10 mm long in their place. Use four screws to secure each inner member.

3 Attach the outer member brackets to the rack.
Check that the height is the same for the left and right brackets.

4 Attach the AJ-MA75P rack-mounting adaptors with included 4 screws.



5 Remove the 4 rubber legs from the bottom of the unit, and install the unit in the rack.
After the unit has been installed, check that it moves smoothly along the rails.



<Notes>
- Keep the temperature inside the rack to between 5°C and 40°C.
- Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video head cleaning

This unit has an auto head cleaning function which automatically reduces the dirt on the heads. However, to further increase the unit’s reliability, it is recommended that its video heads be cleaned every day.
Use the cleaning fluid designated by Panasonic.

Condensation

Condensation occurs due to the same principle involved when droplets of water form on a window pane of a heated room. It occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from a cold location to a hot or humid location.

When moving the unit to locations such as these, leave it standing for about 10 minutes rather than switching on the power immediately.
If condensation has formed on or in the unit, the AUTO OFF lamp lights and the cassette tape is automatically ejected.
Keep the power supplied and simply wait until the AUTO OFF lamp goes off.

- ■ Do not insert fingers or any objects into the video cassette holder.
- ■ Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- ■ Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- ■ Do not spray any cleaner or wax directly on the unit.
- ■ If the unit is not going to be used for a length of time, protect it from dirt and dust.
- ■ Do not leave a cassette in the recorder when not in use.
- ■ Do not block the ventilation slots of the unit.
- ■ Use this unit horizontally and do not place anything on the top panel.
- ■ Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- ■ Cassette tape can be used for either Colour or Black & White recording.
- ■ Do not attempt to disassemble the recorder.
  There are no user serviceable parts inside.
- ■ If any liquid spills inside the recorder, have the recorder examined for possible damage.
- ■ Refer any needed servicing to authorized service personnel.

Error messages

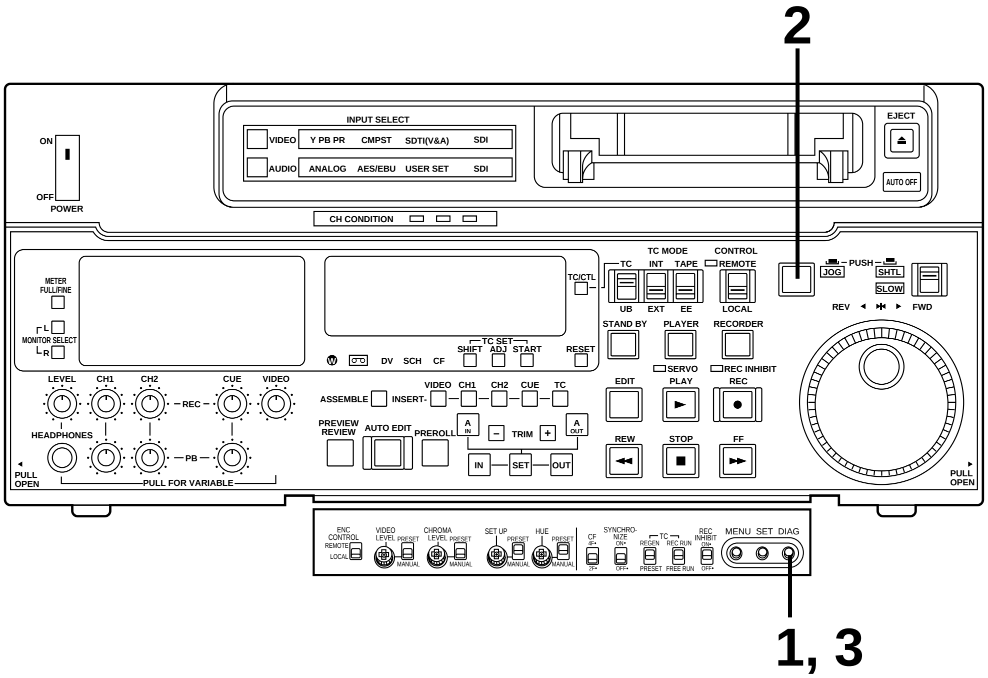
When a warning occurs in this unit, the warning lamp lights up.
Opening the DIAG menu will display the warning description on the counter display and the monitor. Also, when an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and a message appears on the counter display.

DIAG menu

This display the VCR information.
VCR information includes “WARNING” information and “HOURS METER” (usage time) information. A DIAG menu appears on the monitor when the monitor is connected to the VIDEO OUT 3 connector on the connector section.

Displaying the DIAG menu

1. Press the DIAG button.
   The DIAG menu screen is displayed on the monitor, and the message is displayed on the counter display.
2. The “WARNING” information and “HOURS METER” information can be switched by pressing the search buttons.
3. Press the DIAG button again to return to the original display.


2
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
TC/CTL
TC MODE
CONTROL
REMOTE
TC
INT
TAPE
UB
EXT
EE
LOCAL
JOG
PUSH
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL FOR VARIABLE
PULL OPEN
ASSEMBLE
INSERT
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
TRIM
IN
SET
OUT
EDIT
PLAY
REW
STOP
FF
ENC CONTROL
VIDEO LEVEL
CHROMA LEVEL
SET UP
HUE
PRESET
MANUAL
SYNCHRO-NIZE
REGEN
REC RUN
FREE RUN
MENU
SET
DIAG
1, 3

“WARNING” information display

- A warning message is displayed whenever a warning occurs (the warning lamp lights up). When warnings have not been detected, “NO WARNING” is displayed.
- When multiple warning occur, the descriptions for each warning can be checked by turning the search dial.

Error messages

Displaying the “HOURS METER” information

Turn the search dial to move the cursor (∗). The description for the item where the cursor is located is shown on the counter display.

Item No.	Item	Description
H00	OPERATION	Displays the time that the power has been supplied in one-hour units.
H01	DRUM RUN	Displays the time that the drum has been rotating in one-hour units.
H02	TAPE RUN	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units.
H03	THREADING	The number of times for threading/unthreading is displayed in single units.
H11	DRUM RUN r	Displays the time that the drum has been rotating in one-hour units. (Can be reset)
H12	TAPE RUN r	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units. (Can be reset)
H13	THREADING r	The number of times for threading/unthreading is displayed in single units. (Can be reset)
H30	POWER ON	This displays the number of times the power has been turned on in 1-time increments.

<Notes>

- The resettable items in the “HOURS METER” information are reset by the shop when performing maintenance or other work.
- The search buttons and the search dial cannot be operated while the DIAG menu is displayed.

If “T&S&M” is selected in the setup menu No. 003 (DISPLAY SEL), a message appears in the mode display whenever a warning or error occurs. When multiple events occur, the event with the highest priority is displayed.

Priority	Display	Description
High	Error messages (See error message table)	When an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and an error message is displayed.
	INT SG	If “BB” in No. 601 (INT BB SIG) in the setup menu is selected or when ON has been selected as the setup menu No. 722 (INT SG) setting, pressing the REC button or the EDIT button (E to E mode) will display “INT SG” for the first two seconds. This is also displayed for the first two seconds when starting editing.
	NO INPUT	If there is no input signal (except for analogue audio) to the connector selected using the INPUT SELECT switch, pressing the REC button or the EDIT button (E to E mode) will display “NO INPUT” for the first two seconds. This is also displayed for the first two seconds when starting editing.
Low	Warning messages (See error message table)	When a warning occurs in this unit, the warning lamp lights up and a warning message is displayed. When multiple warnings occur, the warning with the highest priority is displayed.

Warning messages

Priority	Monitor display	Description	VTR operation
High	FAN STOP	This is displayed when the fan motor stops.	Operation continues
	SERVO NOT LOCKED	This is displayed when the servo is not locked for three or more seconds during playback, recording, or editing.	Operation continues
	LOW RF	This is displayed when envelope levels approximately 1/3 that of normal levels are detected for more than one second during playback, recording, or editing.	Operation continues
	HIGH ERROR RATE	This is displayed when the error rate increases and correction/interpolation is performed on either the video or audio playback signal.	Operation continues
Low	OVER RECORDING	When voice-over editing is performed using the internal audio memory, this message appears if the duration of the signals recorded in the memory exceeds 20 seconds.	Operation continues

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
CAP ROTATE TOO SLOW	**CAP ROTA TOO SLOW**	If the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
CAP TENSION ERROR	**CAP TENSION ERROR**	If an abnormal tension at the supply side is detected in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DEW	**DEW**	If condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to eliminate the condensation. When the condensation has been eliminated, the AUTO OFF lamp and message display go off, and the VTR can be used. **<Notes>** 1) If condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. 2) If condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	EJECT (Normal operation resumed after condensation is eliminated)
DRUM ROTATE TOO FAST	**DRUM ROTA TOO FAST**	If the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM ROTATE TOO SLOW	**DRUM ROTA TOO SLOW**	If the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
E-FF	**E-FF**	If the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
FRONT LOAD ERROR	**FRONT LOAD ERROR**	The AUTO OFF lamp lights and the message display flashes when the take-up reel has been rotating idly for a fixed period of time while the start/end processing operation during loading (half position) is being performed or when it was impossible to eject the tape.	STOP (POWER OFF→ON)
FRONT LOAD MOTOR	**FRONT LOAD MOTOR**	If the cassette does not move up even when 6 seconds have elapsed since the VTR was transferred to the eject mode, the AUTO OFF lamp lights, and the message display flashes. **<Note>** If the cassette does not move down inside the machine even when 6 seconds have elapsed since the cassette was inserted, the VTR is transferred to the eject mode.	STOP (POWER OFF→ON)
LOADING MOTOR	**LOADING MOTOR**	When the unloading operation is not completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. **<Note>** When the loading operation is not completed within 6 seconds, the VTR is transferred to the eject (unloading) mode.	STOP (POWER OFF→ON)

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
REEL DIR UNMATCH	**REEL DIR UNMATCH**	If the reel motor at the take-up side is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
REEL TENSION ERROR	**REEL TENSION ERROR**	If an abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO COMM ERROR	**SERVO COMM ERROR**	When the servo microcomputer does not follow the instructions of the system control microcomputer even when 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO CONTROL ERROR	**SERVO CONTROL ERR**	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO ERROR	**SERVO ERROR**	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S-FF/REW TIMEOVER	**S-FF/REW TIMEOVER**	If the start/end processing operation is not completed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL ROTA TOO FAST	**S REEL TOO FAST**	If the supply reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL TORQUE ERROR	**S REEL TORQUE ERR**	If an abnormal torque applied to the supply reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL ROTA TOO FAST	**T REEL TOO FAST**	If the take-up reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL TORQUE ERROR	**T REEL TORQUE ERR**	If an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
UNLOAD ERROR	**UNLOAD ERROR**	If the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP ERROR	**WINDUP ERROR**	If the tape was not wound up at less than the standard speed (1×) when the total tape amount was not detected or if abnormal tape slack or tension was detected at speeds above 1× after the total tape amount was detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP REEL NOT ROTA	**W-UP REEL NOT ROTA**	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape at the standard speed (1×) or faster while the total tape amount is not detected and while the tape is travelling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)

RS-232C interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232C interface is used.
(See command table on pages 96 – 98.)

(2) Conditions for acknowledging commands from RS-232C interface
The front panel REMOTE/LOCAL switch must be at REMOTE.
The setup menu item No. 204 "RS232C SEL" must be ON.

If the above conditions are not met, [ACK] + [STX]ER001[EXT] is returned to the external unit.
Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 "RETURN ACK".

2. Hardware specifications

External interface specifications

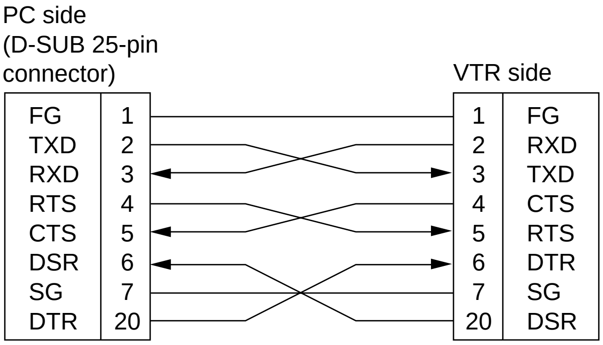
1) Connector specifications

Connector: D-SUB 25-pin (crossover cable supported)

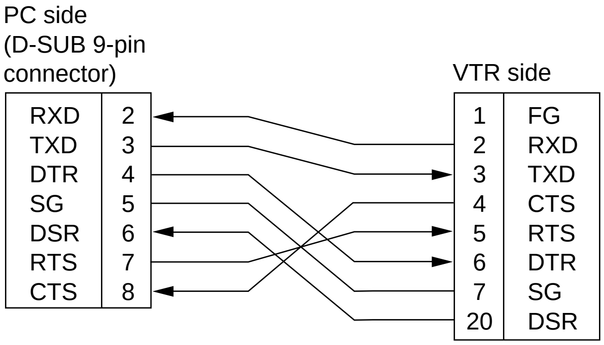
Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

2) Example of connection with controller (PC)

- **Using crossover cable with D-SUB 25-pin connectors**


PC side
(D-SUB 25-pin
connector)
VTR side
FG 1
TXD 2
RXD 3
RTS 4
CTS 5
DSR 6
SG 7
DTR 20
1 FG
2 RXD
3 TXD
4 CTS
5 RTS
6 DTR
7 SG
20 DSR

- **Using crossover cable with D-SUB 9-pin and 25-pin connectors**


PC side
(D-SUB 9-pin
connector)
VTR side
RXD 2
TXD 3
DTR 4
SG 5
DSR 6
RTS 7
CTS 8
1 FG
2 RXD
3 TXD
4 CTS
5 RTS
6 DTR
7 SG
20 DSR

3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Communication speed	300/600/1200/2400/4800/9600
Bit length	7 bit/8 bit
Stop bit	1 bit/2 bit
Parity bit	NONE/ODD/EVEN
ACK code	ACK code returned/ACK code not returned **<Note>** The ACK code is what is returned from the VTR to the controller when data has been successfully sent from the controller.

The underlining indicates the factory settings.

Any changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication speed	No. 205 BAUD RATE
Bit length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ **Data format**

```
[STX]  [command]   [:]    [data]   [ETX]
 02h    XX XX XX  3Ah  XX-XX    03h        ←(ASCII code: symbols, numbers upper-case letters)

        20h<XX<7Fh
```

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: This code serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ **Outline of send procedure from controller**

1. The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows and the data is added as required.
   The format ends with ETX (end of text = 03h).
2. When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 95.)
3. If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX which was received again at the head.

3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response is made.

■ When the communication has terminated normally

1. The receive completion message is returned.
   [ACK]
   06h

2. The execution completion message is returned.
   [STX] [command] [data] [ETX]
   02h XX XX XX XX-XX 03h

- [command]: This is the message (data) which is returned or the execution completion message identifier.
- [data]: This is the data to be returned. It can be omitted.

Example:	Send command		Return message (data)
	[STX] OPL [ETX]	→	[ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

1. The receive completion message is returned.
   [ACK]
   06h

2. An error code is returned.
   [STX] E R N_1 N_2 N_3 [ETX]
   02h Error code 03h

4. Error code table

ER001: Invalid command
- Unsupported command received.
- Error in command execution

ER002: Parameter error
ER102: VTR mode error (front loading motor)
ER103: VTR mode error (loading motor)
ER104: VTR mode error (drum, capstan system)
ER105: VTR mode error (reel system)
ER106: VTR mode error (tension system)
ER108: VTR dew error
ER1FF: VTR system error

5. Command table

(1) Commands relating to operation control

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
STOP	[STX] OSP [ETX]	[STX] OSP [ETX]	This command is for stopping the tape travel. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL).
EJECT	[STX] OEJ [ETX]	[STX] OEJ [ETX]	This command is for ejecting the cassette tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL).
PLAY	[STX] OPL [ETX]	[STX] OPL [ETX]	This command is for starting playback.
REWIND	[STX] ORW [ETX]	[STX] ORW [ETX]	This command is for rewinding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
FAST FORWARD	[STX] OFF [ETX]	[STX] OFF [ETX]	This command is for fast forwarding the tape. The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL). The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).
REC	[STX] ORC [ETX]	[STX] ORC [ETX]	This command is for starting the recording.
SHTL FORWARD	[STX] OSF:data [ETX]	[STX] OSF [ETX]	This is the forward direction shuttle command.
	data = n: speed data 0: STILL 1: ×0.03 (DVCPRO), ×0.03 (DV, DVCAM) 2: ×0.1 (DVCPRO), ×0.1 (DV, DVCAM) 3: ×0.2 (DVCPRO), ×0.3 (DV, DVCAM) 4: ×0.5 (DVCPRO), ×0.5 (DV, DVCAM) 5: ×1 (DVCPRO), ×1 (DV, DVCAM) 6: ×1.85 (DVCPRO), ×1.85 (DV, DVCAM) 7: ×4.1 (DVCPRO), ×3.1 (DV, DVCAM) 8: ×9.5 (DVCPRO), ×9.5 (DV, DVCAM) 9: ×16 (DVCPRO), ×16 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). A: ×32 (DVCPRO), ×32 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX).		

<table>
<tr><th>VTR operation</th><th>Send command</th><th>Return (completion) message</th><th>Supplementary notes</th></tr>
<tr><td rowspan="2">SHTL REVERSE</td><td>[STX] OSR:data [ETX]</td><td>[STX] OSR [ETX]</td><td>This is the reverse direction shuttle command.</td></tr>
<tr><td colspan="3">data = n: speed data
0: STILL
1: ×0.03 (DVCPRO), ×0.03 (DV, DVCAM)
2: ×0.1 (DVCPRO), ×0.1 (DV, DVCAM)
3: ×0.2 (DVCPRO), ×0.3 (DV, DVCAM)
4: ×0.43 (DVCPRO), ×0.5 (DV, DVCAM)
5: ×1 (DVCPRO), ×1 (DV, DVCAM)
6: ×1.85 (DVCPRO), ×1.85 (DV, DVCAM)
7: ×4.1 (DVCPRO), ×3.1 (DV, DVCAM)
8: ×9.5 (DVCPRO), ×9.5 (DV, DVCAM)
9: ×16 (DVCPRO), ×16 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX).
A: ×32 (DVCPRO), ×32 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX).</td></tr>
<tr><td>STANDBY OFF</td><td>[STX] OBF [ETX]</td><td>[STX] OBF [ETX]</td><td>This command is setting the VTR to standby OFF.</td></tr>
<tr><td>STANDBY ON</td><td>[STX] OBN [ETX]</td><td>[STX] OBN [ETX]</td><td>This command is setting the VTR to standby ON.</td></tr>
</table>

(2) Commands relating to inquiries

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX]	This command is for inquiring about the counter value.
		data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display – (2Dh): for a minus display h = 0 – 9: hours TC: gh = 00 – 23: hours mm = 00 – 59: minutes ss = 00 – 59: seconds ff = 00 – 24: frames	CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX]	This command is for inquiring about the VTR's operation mode.
		xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORC: REC ORW: REWIND OSP: STOP (including the STANDBY ON) SRS: (IN/OUT) PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE EAE: AUTO EDIT EON: EDIT ON (MANUAL EDIT) EPV: PREVIEW ERV: REVIEW	
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX]	This command is for inquiring about the VTR used.
		data = AJ-D850E	

(3) Microsoft QuickBASIC sample programme

```
CLS
STX$ = CHR$(&H2): ETX$ = CHR$ (&H3): NAK$ = CHR$(15): ACK$ = CHR$(&H6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
        WAITKEY$ = INKEY$
        IF WAITKEY$ = "Q" THEN PRINT "*** Quit ***": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RECV$ = INPUT$(1, #1)
IF RECV$ = STX$ THEN RECV$ = "[Stx]"
IF RECV$ = ACK$ THEN RECV$ = "[Ack]"
IF RECV$ = NAK$ THEN RECV$ = "[Nak]"
IF RECV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[Etx]": GOTO DispOut
BUFFER$ = BUFFER$ + RECV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END
```

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Connector signals

VIDEO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through (Option)
Y, P_B, P_R (ANALOGUE)	BNC × 3	
VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided
REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided

VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3	(Option)
Y, P_B, P_R (ANALOGUE)	BNC × 3	
VIDEO OUT	BNC × 3	

AUDIO IN

SERIAL IN (DIGITAL)	BNC × 2	(Option)
AUDIO IN (DIGITAL)	XLR × 2	CH1/CH2, AES/EBU format
AUDIO IN (ANALOGUE)	XLR × 2	CH1, CH2
CUE IN	XLR × 1	
TIME CODE IN	XLR × 1	

Pin No.	Signal
1	GND
2	HOT
3	COLD

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3	(Option)
AUDIO OUT (DIGITAL)	XLR × 2	CH1/CH2, AES/EBU format
AUDIO OUT (ANALOGUE)	XLR × 2	CH1, CH2
CUE OUT	XLR × 1	
TIME CODE OUT	XLR × 1	
MONITOR OUT	XLR × 2	L (CH1)/R (CH2)
HEADPHONES (front)	M6	

RS-422A REMOTE (9P)

REMOTE IN/OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	————	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	————	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	————	19	STAND BY ON STATUS
2	STOP COMMAND	11	————	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	REC COMMAND	14	STOP STATUS	23	————
6	EJECT COMMAND	15	FF STATUS	24	————
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	REC STATUS		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- COMMAND pins: TTL level, active low, ≥100ms edge electrical signal.
- STATUS pins: open collector, sink current 6 mA

RS-232C REMOTE (25-pin D-SUB crossover cable supported)

Pin No.	Abbreviation	Circuit	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Sends data to the PC.
3	TxD	Transmitted data	Receives data from the PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	GND	Signal ground	Signal ground
20	DSR	Data set ready	Positive power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	————	6	SYSTEM H 0	11	RET GND
2	SET UP	7	SYS.SC COARSE (2)	12	————
3	C LEVEL	8	–12V	13	————
4	GND	9	HUE	14	SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

Specifications

GENERAL

Power supply:	AC 220 – 240 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature:	5°C to 40°C (41°F to 104°F)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	16.8 kg
Dimensions (W × H × D):	424 × 175 × 415 mm
Recording format:	DVCPRO format
Recording tracks:	Digital video
	Time code; Recorded in sub-code area
	Digital audio; 2 channels
	Cue signal; 1 track
	Control (CTL); 1 track
Tape speed:	33.854 mm/sec
Tape:	1/4-inch thin magnetic layer metal tape
Editing accuracy:	±0 frame (using time code)
Tape timer accuracy:	±1 frame (using continuous CTL signal)
Servo lock time:	Less than 0.5 sec. (colour framing/ standby ON)

VIDEO

(Digital video)

Sampling frequencies:	Y; 13.5 MHz/P_B, P_R; 3.375 MHz
Quantizing:	8 bits
Error correction:	Reed-Solomon product code

(Digital IN/analogue component OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±0.5 dB)
	5.75 MHz (–2 dB)
	P_B, P_R; 25 Hz to 1.3 MHz (±1 dB)
	1.5 MHz (–5 dB) typ.
S/N ratio:	Better than 60 dB
K factor:	Less than 1%

(Analogue component IN/component OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±1 dB)
	5.75 MHz (–3 dB)
	P_B, P_R; 25 Hz to 1.3 MHz (±1 dB)
	1.5 MHz (–6 dB) typ.
S/N ratio:	Better than 55 dB
K factor:	Less than 1%

(Analogue composite IN/composite OUT)

Video bandwidth:	Y; 25 Hz to 5.5 MHz (±1 dB) typ.
DG:	Less than 4%
DP:	Less than 3°
Y/C delay:	Better than 20 nsec
K factor:	Less than 2.5%

(Video input connector)

Analogue component input:	BNC×3 (Y, P_B, P_R)
	Y; 1.0 Vp-p, 75Ω
	P_B, P_R; 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite input:	BNC×2, loop-through, 75Ω on/off
Reference input:	Analogue composite
	BNC×2, loop-through, 75Ω on/off
Serial digital component input (option):	Complies with EBU Tech. 3267-E standard, BNC×2, active through

(Video output connector)

Analogue component output:	BNC×3 (Y, P_B, P_R)
	Y; 1.0 Vp-p, 75Ω
	P_B, P_R; 0.7 Vp-p, 75Ω (100% colour bar)
Analogue composite output:	BNC×3
	Video1/video2/video3 (superimpose on/off)
Serial digital component output (option):	Complies with EBU Tech. 3267-E standard, BNC×3

(Video signals adjustment)

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output chroma phase:	±30°
Video output black level:	±100 mV
Video output sync phase:	±15 µsec
Video output SC phase:	±180°
Video output Y/C delay:	±300 nsec

AUDIO

(Digital audio)

Sampling frequencies:	48 kHz
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ±1 dB
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, "A" weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk:	Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	18 dB
Emphasis:	T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response:	300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analogue input (CH1/CH2):	XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2):	XLR×1, AES/EBU format
Serial digital input (option):	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track input:	XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analogue output (CH1/CH2):	XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2):	XLR×1, AES/EBU format
Serial digital output (option):	Complies with EBU Tech. 3267-E standard (BNC, 75Ω)
Cue track output:	XLR×1, low impedance, +4/0/–20 dBu
Monitor output:	XLR×2, low impedance, +4/0/–20 dBu
Headphones:	Variable level, mini-jack, 8Ω

Other input/output connector

Time code input:	XLR×1, 0.5 to 8 Vp-p
Time code output:	XLR×1, 2.0 Vp-p
RS-422A input/output:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions shown are approximately.
Specifications are subject to change without notice.

Panasonic Broadcast Europe
Panasonic Broadcast Europe Ltd.
West Forest Gate, Wellington Road, Wokingham, Berkshire RG40 2AQ U.K. Tel: 0118 902 9200

Panasonic Broadcast Europe GmbH
Hagenauer Str. 43, 65203 Wiesbaden-Biebrich Deutschland Tel: 49-611-1816-0

Printed in Japan
VQT7282

S1198H100 Ⓐ **E**

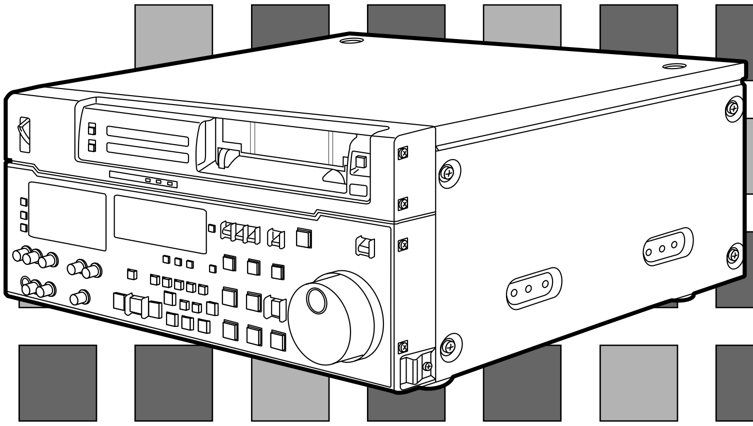
Panasonic

DVCPRO

Digital Video Cassette Recorder

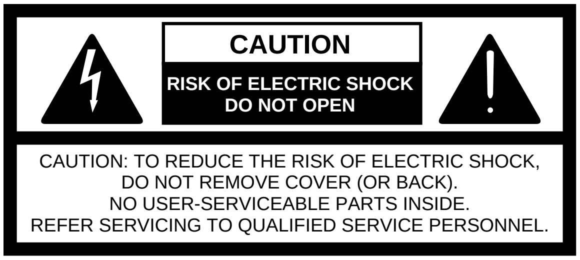
AJ-D850P

Operating Instructions



IMPORTANT

"Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws."



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:

To reduce the risk of fire or shock hazard and annoying interference, use the recommended accessories only.

WARNING:

To reduce the risk of fire or shock hazard, do not expose this equipment to rain or moisture.

CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD TO AUTHORIZED SERVICE PERSONNEL.

FCC Note:

This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

☐ is the safety information.

- Do not insert fingers or any objects into the video casette holder.
- Avoid operating or leaving the unit near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the unit in an excessively hot, cold, or damp environment as this may result in damage both to the recorder and to the tape.
- Do not spray any cleaner or wax directly on the unit.
- If the unit is not going to be used for a length of time, protect it from dirt and dust.
- Do not leave a cassette in the recorder when not in use.
- Do not block the ventilation slots of the unit.
- Use this unit horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either Color or Black & White recording.
- Do not attempt to disassemble the recorder.
  There are no user serviceable parts inside.
- If any liquid spills inside the recorder, have the recorder examined for possible damage.
- Refer any needed servicing to authorized service personnel.

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Before operating this unit, check that all of its accessories are present and accounted for.

Power cord....1 pc

Option
- AJ-YA750P Component serial interface board
- AJ-CS750P Cassette adaptor
- AJ-MA75P Rack mounting adaptor
- AJ-YA752 Audio memory unit
- AJ-YAC850P SDTI/SDI board

General and Features

This unit is a digital video cassette recorder which uses 1/4-inch tapes.
It incorporates digital compression technology so that the deterioration in picture quality and sound quality resulting from dubbing is significantly minimized compared with existing analog systems.
Furthermore, since it has a compact 4U size and light weight, the unit can be carried around or mounted in a 19-inch rack with ease.
The settings for the unit's setup can be performed interactively while viewing the screen menus on the TV monitor, and editing functions include both assemble and insert editing.

Features

Compact size and light weight

This is a 4U size digital VTR. It can be mounted in a 19-inch rack with ease using the optional rack-mounting adaptors (AJ-MA75P).

Up to 184 minutes of recording

Two sizes of cassette tapes can be used with this unit: M cassette (max. 66 minutes) and L cassette (max. 184 minutes). The width of the tapes measures 1/4 inch to achieve a compact design.

Compatibility with consumer products

Consumer cassette tapes shot with digital cameras available on the consumer market can be played back on this unit using the optional cassette adaptor (AJ-CS750P).

<Notes>

- Slow motion playback is not possible with consumer cassette tapes.
- Consumer cassette tapes recorded in LP mode cannot be played back.

Digital slow motion/dial jog

The slow-motion playback images can be reproduced clearly at any of the speeds given below using commands from the external controller or other such device: –0.43/–0.3/–0.2/–0.1/–0.03/0/+0.03/+0.1/+0.2/+0.3/+0.5/+0.75.

<Note>

Some noise may occur when the slow motion speed is changed.

Digital audio output in slow-motion/jog mode

This enables smooth playback of sound even in the slow-motion or jog mode, making it easier to use sound to search for edit points and determine their positions.

Dial shuttle

Shuttle operations enable the tape to be played back with color images at a speed of up to 60 times normal tape speed in either the forward or reverse direction.

Internal audio memory with 20-second capacity

Sound can now be recorded as pictures are played back without any time lag between the sound and picture (a process known as "voice-over"). Audio cross channel editing is enabled by using the unit in combination with an external sound mixer.

Audio memory unit (AJ-YA752) supported

Voice-over extending up to 34 minutes and 30 seconds (5 min. 46 sec. standard) is enabled by connecting the AJ-YA752 unit (optional accessory).

Recording and playing back V blanking data

In addition to closed caption and VITC, up to 28 lines of the character data per frame in the V blanking period can be recorded and played back.

<Note>

There is some limitation to the number of lines in which signals can be recorded.

Time codes

This unit comes with a built-in time code generator (TCG)/time code reader (TCR). In addition to the internal time code, an external code input or input signal VITC can be recorded in the machine as the LTC time code.

Multi-function input/output interfaces

- **Analog input/output**
  Component (Y, P_B, P_R) and composite signal input and output connectors are provided.
- **Serial digital input/output**
  Digital component interfacing complying with the EBU Tech. 3267-E serial digital signal standard is possible when the optional component serial interface board (AJ-YA750P) is used. Transfer using SDTI is enabled by the AJ-YAC850P SDTI/SDI board (option). (SMPTE 305M)
- **AES/EBU audio input/output**
  Digital audio input and output connectors are provided.
- **9-pin (RS-422A)/(RS-232C) remote**
  In addition to the standard 9-pin serial (RS-422A) connector, RS-232C and 25-pin parallel connectors are also featured.
  The RS-422A connector enables another VTR to be operated in parallel with the unit if a looping connection is used for the two units.

2-channel high-sound-quality digital audio

Sound can be edited separately for two channels while channel mixing capabilities are also available. One channel is provided for the analog cue track.

Automatic editing functions

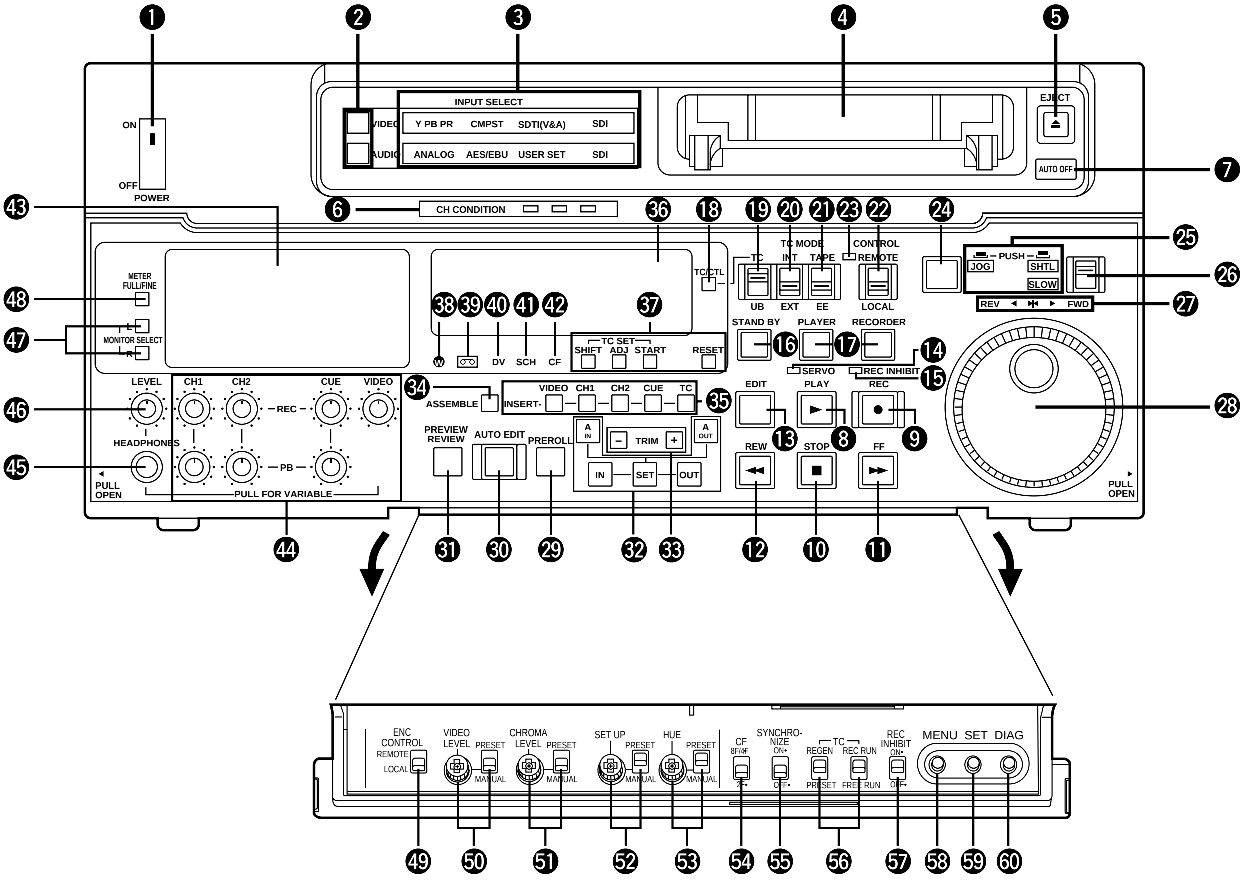
Assembly and insert editing can be performed.

Menu-driven setup

The setup settings, which are conducted prior to operating the unit, are performed while viewing the setup menus either on the unit’s display or a TV monitor.

Controls and their functions

Front panel



INPUT SELECT
VIDEO
AUDIO
Y PB PR
CMPST
SDTI(V&A)
SDI
ANALOG
AES/EBU
USER SET
SDI
ON
OFF
POWER
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
LEVEL
CH1
CH2
CUE
VIDEO
REC
PB
HEADPHONES
PULL OPEN
PULL FOR VARIABLE
DV
SCH
CF
TC SET
SHIFT
ADJ
START
RESET
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
PUSH
JOG
SHTL
SLOW
REV
FWD
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
ENC CONTROL
REMOTE
LOCAL
VIDEO LEVEL
PRESET
MANUAL
CHROMA LEVEL
PRESET
MANUAL
SET UP
PRESET
MANUAL
HUE
PRESET
MANUAL
CF
8F/4F
2F
SYNCHRO-NIZE
ON
OFF
TC
REGEN
PRESET
REC RUN
FREE RUN
REC INHIBIT
ON
OFF
MENU
SET
DIAG
❶
❷
❸
❹
❺
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(60)

<Front Panel Top Section>

❶ POWER switch

When the ON side is pressed, the power is switched on, and the audio level and video level meters, counter display and INPUT SELECT display light up.

❷ INPUT SELECT switches

These are used to select the video and audio input signals.

<Video>

Each time the VIDEO button is pressed, the input video signal selection is switched in the order of Y P_B P_R, COMPOSITE, SDTI (V&A), SDI and back to Y P_B P_R. If SDTI (V&A) is selected, both the video and audio signals will be input from SDTI.

<Audio>

Each time the AUDIO button is pressed, the input audio signal selection is switched in the order of ANALOG, AES/EBU, USER SET, SDI and back to ANALOG.

USER SET is a function for selecting two different input signals to be recorded on PCM audio signal CH1 and CH2, and it is used in tandem with the setup menu.

For instance, if USER SET is selected by INPUT SELECT and CH1=ANALOG, and CH2=DIGI are selected on the setup menu No. 710 (CH1 IN SEL), No. 711 (CH2 IN SEL) and No. 712 (DIGI IN SEL), the analog input signal and AES/EBU digital signal will be respectively recorded on channels 1 and 2 of the PCM audio signals recorded on the tape. However, when SDTI has been selected for the video input, SDTI input will be forcibly established for the audio input as well.

<Front Panel Top Section>

❸ INPUT SELECT display

The characters corresponding to the selected input signal light. When, with the exception of analog signals, the selected input signals are not available, the display flashes to alert the user.

<Video>

Y PB PR: Analog component video signal
CMPST: Analog composite video signal
SDTI (V&A): Compressed data, serial and digital video and audio signals (option)
SDI: Serial digital video signal (EBU Tech. 3267-E) (option)

When BB has been selected as the setup menu No. 601 (INT BB SIG) setting, the entire display area will light up.

<Audio>

ANALOG: Analog audio signal
AES/EBU: Digital audio signal
USER SET: Selection of audio signal to be recorded
SDI: Serial digital audio signal (EBU Tech. 3267-E) (option)

When ON has been selected as the setup menu No. 722 (INT SG) setting, the entire display area will light up.

❹ Cassette insertion slot

The M cassette, L cassette and consumer cassette (S cassette) with adaptor are inserted into this slot.

Consumer cassettes can be played back only.

❺ EJECT button

When this is pressed, the tape is unloaded and several seconds later the cassette is automatically ejected. When the counter display indicates “CTL”, the display is reset.

The lamp lights when the eject command is received.

❻ Channel condition lamps

One of these lamps lights in accordance with the error rate status. (Green→amber→red)

Green: This lights when the error rates for the video and audio playback signals are both acceptable.
Amber: This lights when the error rate for the video or audio playback signals has deteriorated.
Red: The playback picture will remain normal even when this lamp lights.
This lights when the video or audio signals are subject to rectification or interpolation.

❼ AUTO OFF lamp

This lights when trouble has arisen in the deck’s operation.

<Front Panel Center Section>

❽ **PLAY button**

Playback commences when this button is pressed.
Recording commences when the button is pressed together with the REC button; manual editing commences when it is pressed together with the EDIT button during playback.
Pressing only the PLAY button during manual editing will cut out the editing and establish the playback mode.

❾ **REC button**

Recording commences when this button is pressed together with the PLAY button.
When it is pressed during playback, search, fast forward or rewind, EE mode images and audio signals can be monitored for as long as it is kept depressed.
When it is pressed in the stop mode, EE mode images and sound can be monitored. When the STOP button is pressed, the original picture and sound are restored.

❿ **STOP button**

When this is pressed, the tape stops traveling, and if the TAPE/EE selector switch is at TAPE, still pictures can be monitored.
The drum continues to rotate even in the stop mode, and the tape remains in close contact with the drum.
If the stop mode continues for more than a certain period of time, the unit automatically switches to the standby OFF mode in order to protect the tape.
The stop mode is established immediately after a cassette has been inserted into the unit.

⓫ **FF button***

The tape is fast forwarded when this is pressed.

⓬ **REW button***

The tape is rewound when this is pressed.

⓭ **EDIT button**

For manual editing, press both this button and the PLAY button together during playback.
When the button is pressed in the stop mode, the input mode signals selected by the ASSEMBLE or INSERT button can be monitored in the EE mode.
The original picture and sound are restored when the STOP button is pressed.
When the button is pressed during playback, search, fast forward or rewind, the input signals of the mode selected by the ASSEMBLE or INSERT button can be monitored in the EE mode for as long as the button is held down.

⓮ **SERVO lamp**

This lights when the drum servo and capstan servo have locked.

⓯ **REC INHIBIT lamp**

This lights when the REC INHIBIT switch in the front panel bottom section is at ON or when the accidental erasure prevention mode has been set for the cassette.
In this state, neither recording nor editing is possible.

* The FF/REW speed can be selected on the setup menu No. 102 (FF. REW MAX), and it is set to the same speed.

<Front Panel Center Section>

⑯ STAND BY button

When this is pressed, the same tension as in the regular stop mode is applied to the tape, and while the head drum continues to rotate, the button's lamp lights to indicate that the standby ON mode is established.
In the standby OFF mode, the half-loading mode is established.
When this button is pressed in the stop mode, the standby OFF mode is established, the half-loading mode is established. The lamp in the button now goes off. When the unit remains in the stop mode for longer than a predetermined period, the standby OFF mode is automatically established in order to protect the tape.
When this button or the STOP button is pressed in the standby OFF mode, the standby ON mode is established.
When a button other than the STOP button is pressed, the mode corresponding to the button pressed is established.
On-screen settings are available for the transfer time to the standby OFF mode.

⑰ PLAYER/RECORDER buttons

These buttons are operated when editing operations are conducted using the unit as the recorder and a VTR equipped with an RS-422A serial interface remote control connector (9 pins). Neither button functions when the unit is used on its own.

PLAYER button: When this button is pressed, its lamp lights, and the player connected to the unit can be operated by remote control. The unit's editing and tape transport buttons now control the player's functions.

RECORDER button: When this button is pressed, its lamp lights, and the editing and tape transport buttons control the recorder's (= the unit's) functions.

⑱ TC/CTL switch

By pressing this switch, what appears on the counter display is changed between TC and CTL.
When TC is selected, either the TC or UB value is displayed depending on the position selected by the TC/UB switch.

⑲ TC/UB switch

This selector switch determines whether the value of TC or UB appears on the counter display when the TC/CTL switch has been set to TC.

⑳ INT/EXT switch

INT: For using the built-in time code generator.

EXT: For using the time external code which is input from the time code input connector or the video signal VITC. The selection is set at the setup menu No. 505 (EXT TC SEL).

㉑ TAPE/EE switch

<In the stop mode>

TAPE: For outputting the signals played back from the tape.

EE: For outputting the input signals selected by the INPUT SELECT switch.
Select NORMAL or THRU as the setup menu No. 116 (EE MODE SEL) setting. In either case, use the switch for monitoring purposes.

<In the editing*/recording mode>

TAPE: For outputting the simultaneous playback signals.

EE: For outputting the input signals selected by the INPUT SELECT switch.

* The SETUP menu No. 308 (CONFI EDIT) setting is required.

<Front Panel Center Section>

㉒ **REMOTE/LOCAL switch**

This switch is set when the unit is to be controlled from an external source using the REMOTE connector, RS-232C connector or parallel connector.

REMOTE: Set to this position when controlling the unit by a device connected using the 9-pin REMOTE connector or RS-232C/parallel connector.

LOCAL: Set to this position when controlling the unit using the controls on its own operation panel.

㉓ **REMOTE lamp**

This lights when the REMOTE/LOCAL switch has been set to the REMOTE position.

㉔ **Search button**

This button is pressed to establish the search mode.

When the search dial is set to the shuttle mode and turned to a particular position, and this button is pressed, playback commences at the speed set by the search dial.

㉕ **JOG/SHTL/SLOW lamps**

These indicate the present status of the search dial and SHTL/SLOW switch.

JOG: This lights when the unit is in the JOG mode.

SHTL: This lights when the unit is in the SHTL mode.

SLOW: This lights when the unit is in the VAR (variable) mode.

㉖ **SHTL/SLOW switch**

This selector switch is set when the search dial is used for SHTL or SLOW applications.

㉗ **REV/STILL/FWD lamps**

One of these lamps lights depending on the operation of the search dial.

REV: This lights when the dial is turned counterclockwise and the tape travels in the REV direction provided that the lamp in the search button has lighted.

STILL: This lights in the JOG mode while the dial is kept stationary, and the tape stops traveling provided that the lamp in the search button has lighted.
It lights in the SHTL mode provided that the dial is at the STILL position.

FWD: This lights when the dial is turned clockwise, and the tape travels in the FWD direction provided that the lamp in the search button has lighted.

㉘ **Search dial**

This is used to search for the edit points.

Each time it is pressed, the mode is alternately set to shuttle or jog, and one of the JOG, SHTL and SLOW lamps lights. When the power has been turned on, the dial will not function until it has first returned to the STILL position.

Shuttle mode: When the dial is turned and stopped at a particular position while the SHTL/SLOW switch is at SHTL, the tape can be played back at the speed corresponding to the dial's rotary angle position. A still picture appears at the dial's center position.
When the dial is turned all the way counterclockwise with the SHTL/SLOW switch at SLOW, the tape speed is set to –4× normal speed, when it is set to the center position, a still picture is produced, and when it is turned all the way clockwise, the tape speed is set to +4× normal speed.
The maximum speed for SLOW can be set using setup menus No. 317 (VAR FWD MAX) and No. 318 (VAR REV MAX).

Jog mode: The dial clickstops are cleared, and the tape is played back at the speed corresponding to the speed at which the dial is turned. The maximum speed can be selected using the setup menu No. 320 (JOG FWD MAX) and No. 321 (JOG REV MAX) settings.

<Front Panel Center Section>

㉙ PREROLL button

This is used for feeding and cueing the tape for manual editing.
When it is pressed, the tape travels to the preroll point where it stops.
The preroll time can be set on the setup menu No. 000 (P-ROLL TIME).
When this button is pressed while the IN or OUT button is held down, the tape can be cued to the IN or OUT point entered.
When the AUTO ENTRY on the setup menu No. 311 is set to “ENA”, IN point has been entered at the point where the PREROLL button is pressed even if the IN point has not been entered.

㉚ AUTO EDIT button

Automatic editing is executed when this is pressed after an edit point has been entered.
When the AUTO EDIT button is pressed though the IN point has not been entered, automatic editing is executed using the point at which the button was pressed as the IN point.

㉛ PREVIEW/REVIEW buttons

PREVIEW: When this is pressed after an edit point has been entered, the tape travels, editing is not performed, and the rehearsal can be activated on the screen connected to the recorder.
If it is pressed when the IN point has not been entered, the point at which the button was pressed is entered as the IN point, and preview is executed accordingly.

REVIEW: If this is pressed after a block has been edited, the now edited block can be played back and monitored on the screen connected to the recorder.

㉜ IN (A IN)/SET/OUT (A OUT) buttons

When the SET button is pressed while the IN (A IN) or OUT (A OUT) button is held down, the IN or OUT point is entered.
The A IN and A OUT buttons are used to enter audio IN and OUT points which are different from the corresponding video points for audio split editing.
While an IN or OUT point is being entered, the lamp in the IN or OUT button corresponding to the point being entered lights.
When this button is pressed after a point has been entered, the IN or OUT point value appears on the counter display. When the IN or OUT button is pressed together with the RESET button, the IN or OUT point entry is cleared.

㉝ TRIM buttons

These buttons are used to trim IN or OUT point finely.
When the “+” or “–” button is pressed while the IN or OUT button is held down, the entered edit point can be trimmed in 1-frame increments. When the “+” button is pressed, the tape is advanced by one frame; when the “–” button is pressed, it is rewound by one frame.

㉞ ASSEMBLE button

This is pressed for assemble editing.
The button is self-illuminating, and it is set ON (lamp lights) when it is pressed once and OFF (lamp goes off) when it is pressed again.

㉟ INSERT buttons

Press one of these five buttons to select the input signals to be edited during insert editing.
The buttons are self-illuminating, and they are set ON (lamp lights) when they are pressed once and OFF (lamp goes off) when they are pressed again.

㊱ Counter display

This displays the TC and CTL count values, on-screen information and other messages.

<Front Panel Center Section>

㊲ Time code buttons

These are used to set the TC or UB value.

SHIFT: When setting the TC or UB value, first press this button to stop the data running. Change the digit now flashing on the display.
Each time the button is pressed, the flashing moves to the right by one digit, and when it reaches the right-most digit, it returns to the left-most digit.
When it is kept depressed, the flashing moves consecutively.

ADJ: This is used to change the numeral of the digit now flashing on the display.
When the button is pressed once, the number is incremented by 1, and when it is kept depressed, the number is incremented consecutively.

START: This enters the data which has been changed by the SHIFT and ADJ buttons.
Also, Pressing this button when the TC or UB value are not set enables the TCG or UBG setting values to be confirmed.

RESET: When this button is pressed in the CTL mode, the display is reset to “00:00:00:00”.
In the CTL mode, the entered edit points are cleared.
In the TC/UB mode, the generator is reset when the button is pressed together with the SHIFT button.

㊳ Warning lamp

This lights to warn the operator of a particular item.

㊴ Cassette insertion display lamp

This lights when a cassette has been inserted into the unit.

㊵ Consumer cassette insertion display lamp

This lights when a cassette recorded on a consumer DV device has been inserted.

㊶ SCH lamp

This lights when the SCH of the external sync signal is within a specific range.

㊷ CF lamp

This lights when the color framing is locked.

㊸ Level meters

These indicate the PCM audio signal CH1/CH2, CUE track signal and video signal levels.
The audio signal indicates the output signal levels.
The video signal indicates the input signal levels.

㊹ Input/output level controls*

These are used to adjust the recording and playback levels of the PCM audio signal CH1/CH2 and CUE track signals and the recording level of the composite video signals.
Each control located on the upper level is for adjusting the recording level, and each control located on the lower level is for adjusting the playback level.
These are “pull for variable” controls which means that they enable adjustment only when they have been pulled up. The signals levels are set to the unity value (preset value) when the controls have been pushed down.

㊺ Headphones jack

The sound being recorded, played back or edited can be monitored on stereo headphones when they are connected to this jack.

* The input levels are always fixed (at –18 dB) when “ON” has been selected as the setup menu No. 722 (INT SG) setting

<Front Panel Center Section>

㊻ **Volume control**

This is used to adjust the headphones volume and the monitor output volume.

Whether the headphones output and monitor output volumes are to be linked or kept separate can be set on the setup menu No. 708 (MONI OUT). (Note that the headphones output volume is normally linked.)

When the volumes are kept separate, the monitor output is set to the unity value (preset value).

㊼ **MONITOR SELECT switches**

These are used to select the audio signals output to the monitor L/R channels.

Each time the “L” button is pressed, the signals output to the monitor L channel are selected in turn in the following order: CH1, CH2, CUE and back to CH1.

Each time the “R” button is pressed, the signals output to the monitor R channel are selected in turn in the following order: CH1, CH2, CUE and back to CH1.

The L or R lamp on the level meter display lights to indicate which signal is now being selected. (When the unit is set to “AUTO 1” or “AUTO 2” in No. 713 (MONI CH SEL) on the setup menu, then the display will change according to the monitor output.)

㊽ **METER (FULL/FINE) selector switch**

This switch is used to select the scale unit display mode for the audio level meters.

FULL mode: Standard scale units (ranging from –∞ to 0 dB) are used.

FINE mode: The scale is divided up into 0.5 dB increments.

<Front Panel Bottom Section>

㊾ ENCODER CONTROL switch

This selects whether the adjustments to the video output signals are to be performed by the unit or by an external encoder/remote controller.

REMOTE: The adjustments to the video output signals are performed by the external encoder/remote controller.

LOCAL: The adjustments to the video output signals are performed by the unit.

㊿ VIDEO LEVEL control and switch

When the ENCODER CONTROL switch is at LOCAL, the video level can be adjusted.
When it is at PRESET, the video level is set to the unity value (0 dB).
When it is at MANUAL, the video level can be adjusted using this control.

(51) CHROMA LEVEL control and switch

When the ENCODER CONTROL switch is at LOCAL, the chroma level can be adjusted. When it is at PRESET, the chroma level is set to the unity value (0 dB). When it is at MANUAL, the chroma level can be adjusted using this control.

(52) SET UP control and switch (Composite output only variable.)

When the ENCODER CONTROL switch is at LOCAL, the setup level can be adjusted. When it is at PRESET, the setup level is set to the unity value (0 IRE). When it is at MANUAL, the setup level can be adjusted using this control.

(53) HUE control and switch (Composite output only variable.)

When the ENCODER CONTROL switch is at LOCAL, the hue can be adjusted. When it is at PRESET, the hue is set to the unity value (0°). When it is at MANUAL, the hue can be adjusted using this control.

(54) CF switch

This selects whether the playback framing is to be locked in 8/4-field increments or 2-field increments.

8F/4F: The framing is locked in 8/4-field increments.

2F: The framing is locked in 2-field increments.

Switching to 8F or 4F is enabled by the SETUP menu No. 107 (CAP.LOCK) setting.

(55) SYNCHRONIZE switch

This selects whether to provide phase synchronization between two decks.

ON: Phase synchronization is provided. Error-less editing can be performed.

OFF: Phase synchronization is not provided. The edit point will be off by several frames, but editing can be performed quickly.

(56) TC generator switch

REGEN: When the REGEN/PRESET switch is at REGEN, the internal time code generator is synchronized with the time code which the time code reader read from the tape. Whether to set TC or UB to REGEN can be selected at the setup menu No. 503 (TCG REGEN).

PRESET: When the REGEN/PRESET switch is at PRESET, presetting is enabled by the controls on the operation panel or by remote control.

REC RUN: The time code runs only during recording when the RUN MODE switch has been set to REC. The time code runs constantly when the REGEN/PRESET switch is set to REGEN.

FREE RUN: The time code runs regardless of the operation mode as long as the power is being supplied when the RUN MODE switch has been set to FREE.

<Front Panel Bottom Section>

(57) REC INHIBIT switch

This selects whether to enable or inhibit the recording on the cassette tape.

ON: The recording on the cassette tape is inhibited.
The REC INHIBIT lamp on the front panel now lights.

OFF: The recording on the cassette tape is enabled provided that the cassette's accidental erasure prevention mechanism has been set to the recording enable position.

(58) MENU button

When this is pressed, the setup menu appears on the TV monitor using VIDEO OUT 3 connector, and the setup menu No. appears on the display.
When it is pressed again, the setup menu setting mode is exited and the original operating mode is restored.

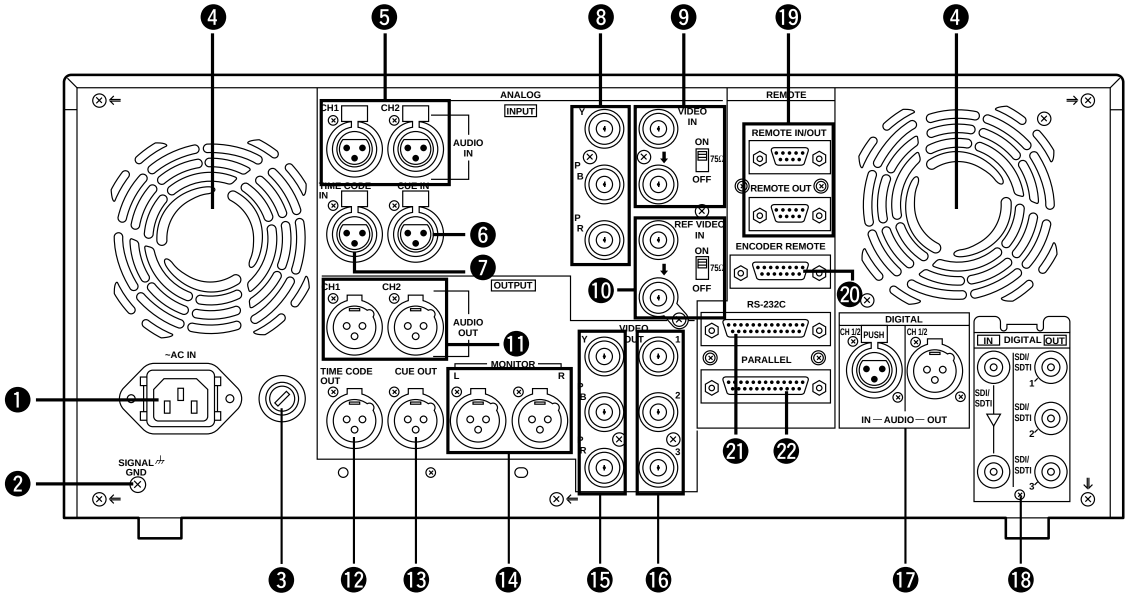
(59) SET button

When this is pressed, the data which has been set on the setup menu is entered. After data entry, the setup menu setting mode is exited and the original operating mode is restored.

(60) DIAG button

When this is pressed, VTR information is displayed. When it is pressed again, the original display is restored.
There are two types of VTR information: "HOURS METER" information and "WARNING" information. Switching between these types is enabled by pressing the search button.
Indicated on the "HOURS METER" screen are the power-on time, drum rotation time, tape travel time, loading count, etc.
Indicated on the "WARNING" screen are the warnings.

Connector area


❹
❺
❽
❾
⓳
❹
ANALOG
INPUT
CH1
CH2
AUDIO IN
TIME CODE IN
CUE IN
❻
❼
OUTPUT
CH1
CH2
AUDIO OUT
⓫
Y
PB
PR
VIDEO IN
ON
75Ω
OFF
REF VIDEO IN
ON
75Ω
OFF
❿
REMOTE
REMOTE IN/OUT
REMOTE OUT
ENCODER REMOTE
⓴
RS-232C
PARALLEL
DIGITAL
CH 1/2
PUSH
CH 1/2
IN — AUDIO — OUT
IN
DIGITAL
OUT
SDI/SDTI 1
SDI/SDTI
SDI/SDTI 2
SDI/SDTI 3
~AC IN
❶
SIGNAL GND
❷
TIME CODE OUT
CUE OUT
MONITOR
L
R
VIDEO OUT
Y
PB
PR
1
2
3
㉑
㉒
❸
⓬
⓭
⓮
⓯
⓰
⓱
⓲

<Connector area>

❶ **AC IN connector**
This is for connecting the unit to the power outlet using the power cord provided.

❷ **SIGNAL GND terminal**
This terminal is connected to the signa unit which is connected to the unit in order to reduce noise. It is not connected to ground for safety purposes.

❸ **Fuse holder**
This contains a fuse.

❹ **Fan motor**
This is for cooling the unit.
The Ⓦ lamp lights when trouble has caused the fan motor to stop. If the unit is still operated in the warning status, the temperature inside the deck will rise, and when it exceeds the safety temperature, all the unit's operations will be shut down.

❺ **ANALOG AUDIO IN connectors**
These are the analog audio input connectors.

❻ **CUE IN connector**
The analog signal to be recorded on the CUE track is supplied to this connector. The audio signals from a microphone can also be recorded by selecting the –60 dB input mode on the setup menu No. 702 (CUE IN LV).

❼ **TIME CODE IN connector**
This is the connector for recording the external time code on the tape.

❽ **ANALOG COMPONENT VIDEO IN connector**
The analog component video signal is supplied to this connector.

❾ **ANALOG COMPOSITE VIDEO IN connectors and 75Ω termination switch**
The analog composite video signal is supplied to these two connectors which are connected in a loop-through configuration. When the termination is required, set the switch to ON.

❿ **REF VIDEO IN connectors and 75Ω termination switch**
These are the input connectors for the reference video signals. When the termination is required, set the switch to ON.

⓫ **ANALOG AUDIO OUT connectors**
The analog audio signals are output from these connectors.

⓬ **TIME CODE OUT connector**
The playback time code is output from this connector during playback.
During recording, the time code generated by the internal time code generator is output.

⓭ **CUE OUT connector**
The analog signal recorded on the CUE track is output from this connector.

⓮ **MONITOR OUT connector**
During playback, the playback signals from the CUE track or PCM audio signal CH1/CH2 are output from this connector.

<Connector area>

⑮ **ANALOG COMPONENT VIDEO OUT connector**
The analog component video signal is output from this connector.

⑯ **ANALOG COMPOSITE VIDEO OUT connectors**
The analog composite video signals are output from these connectors.
The video signal with signals superimposed on it can be output from the VIDEO OUT3 connector.
The superimpose function can be set ON or OFF on the setup menu No. 006 (SUPER).

⑰ **DIGITAL AUDIO IN/OUT connector**
This I/O connector is for digital audio signals which comply with the AES/EBU standard.

⑱ **SERIAL DIGITAL COMPONENT AUDIO/VIDEO IN/OUT connector (optional AJ-YA750P interface board required)**
This I/O connector is for digital component audio and video signals which comply with the EBU Tech. 3267-E standard.
The connectors are known by different names when the AJ-YAC850P SDTI/SDI board (option) is used. For further details, refer to the operating instructions of the AJ-YAC850P board.

⑲ **Remote control connectors**
The unit can be controlled from an external source by connecting the unit with another unit or an external controller.
There are two remote control connectors, one for IN/OUT uses and the other for OUT uses.

IN/OUT:	For connection with an external controller. For connection with deck-to-deck operation.
OUT:	For connection with parallel running operations.

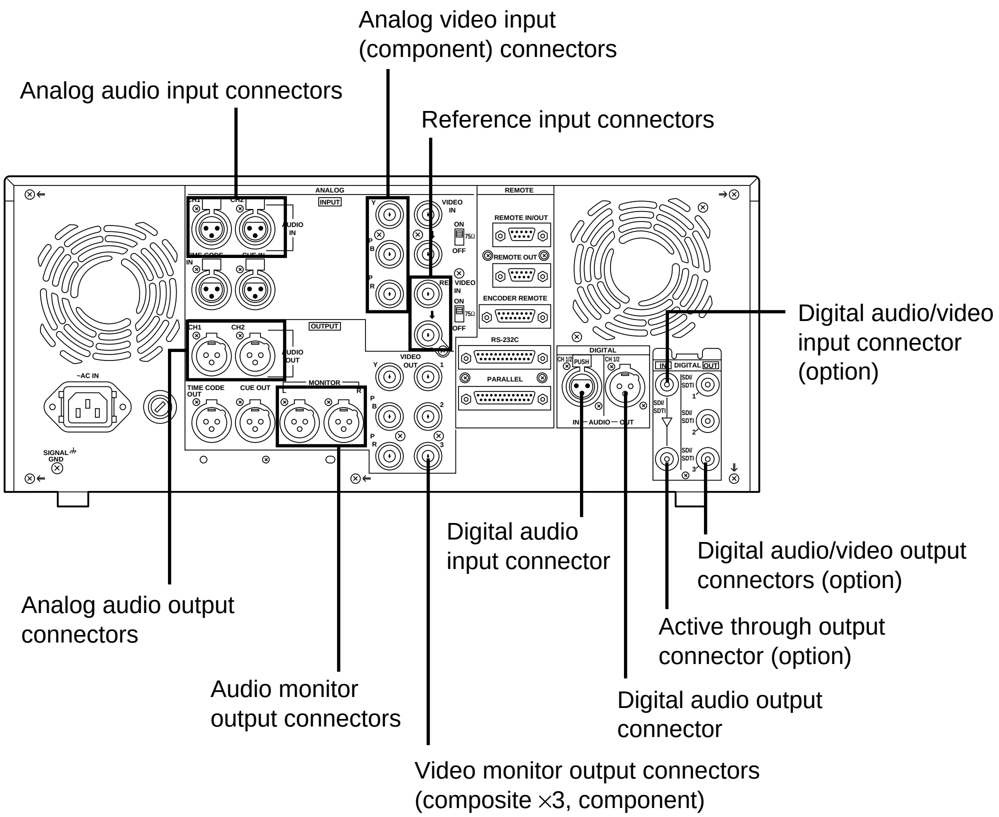
⑳ **ENCODER REMOTE connector**
The external encoder/controller is hooked up to this connector when the video output signal and other settings are to be adjusted from an external source.

㉑ **RS-232C connector**

㉒ **PARALLEL REMOTE connector**
This is used when operating the unit from an external source.

Connections when one unit is used

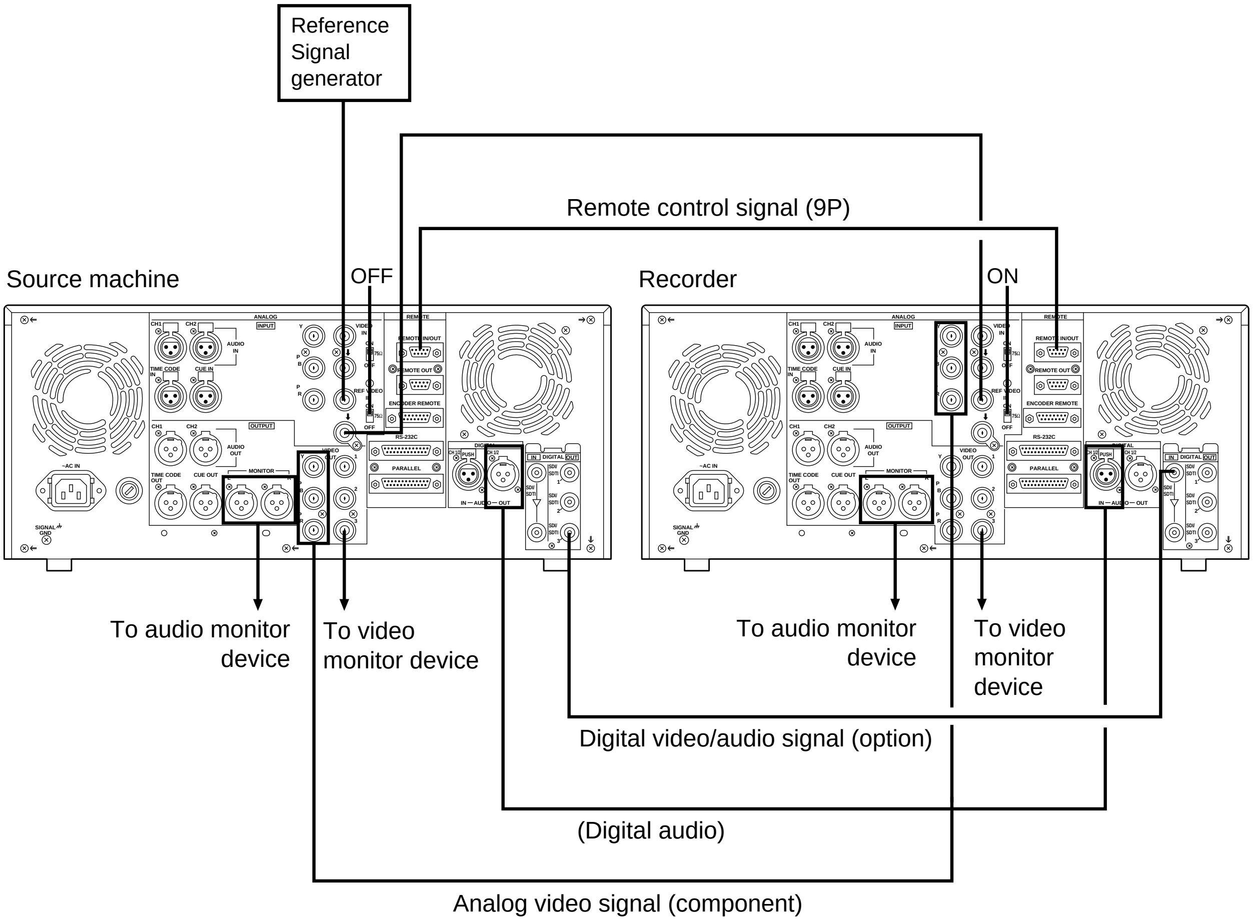
Set the CONTROL switch on the front panel to LOCAL.


Analog video input (component) connectors
Analog audio input connectors
Reference input connectors
Digital audio/video input connector (option)
Digital audio input connector
Digital audio/video output connectors (option)
Analog audio output connectors
Active through output connector (option)
Audio monitor output connectors
Digital audio output connector
Video monitor output connectors (composite ×3, component)

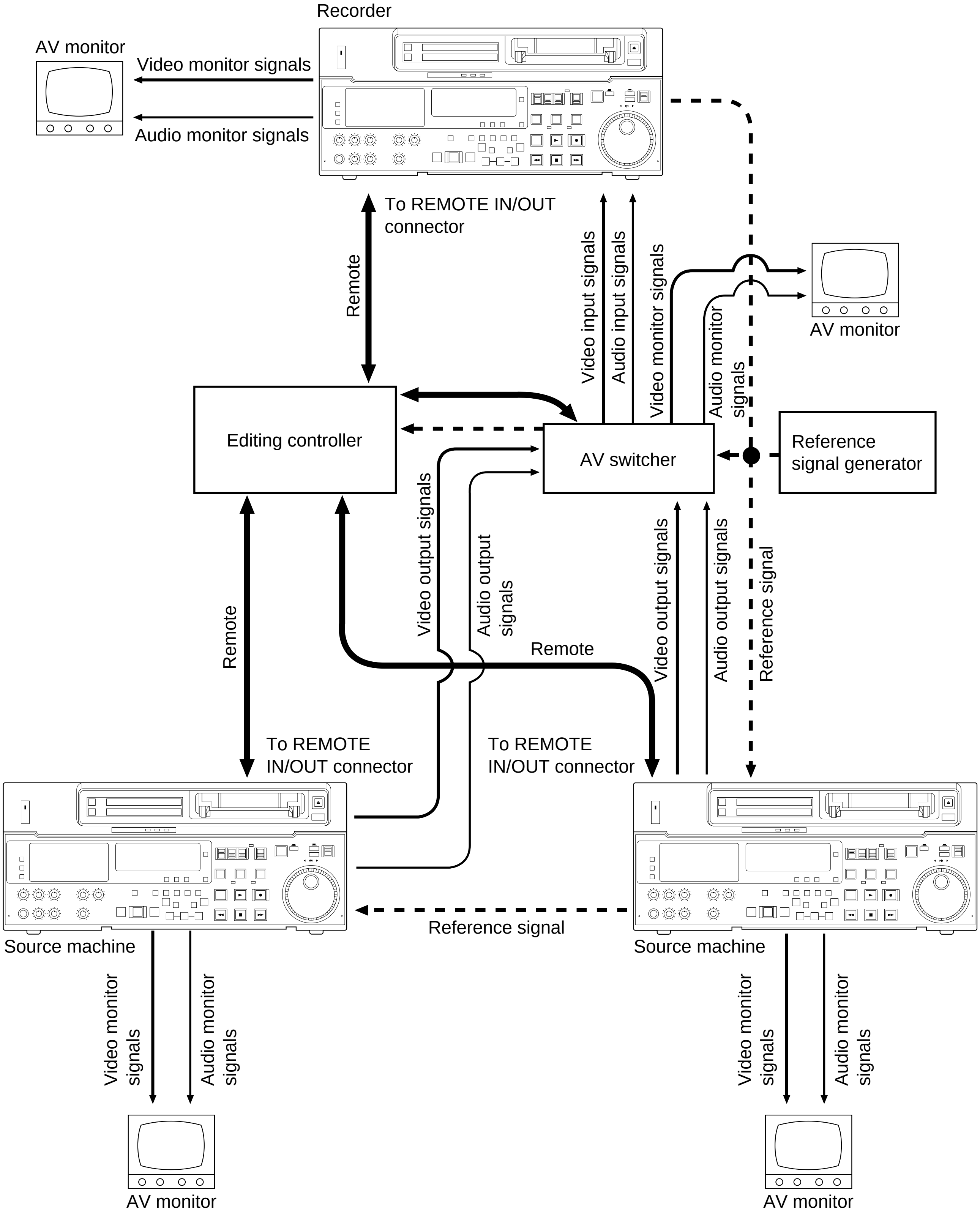
Connections when 2 units are used (deck to deck)

Source machine: • Set the CONTROL switch on the front panel to REMOTE.

Recorder: • Set the CONTROL switch on the front panel to LOCAL.

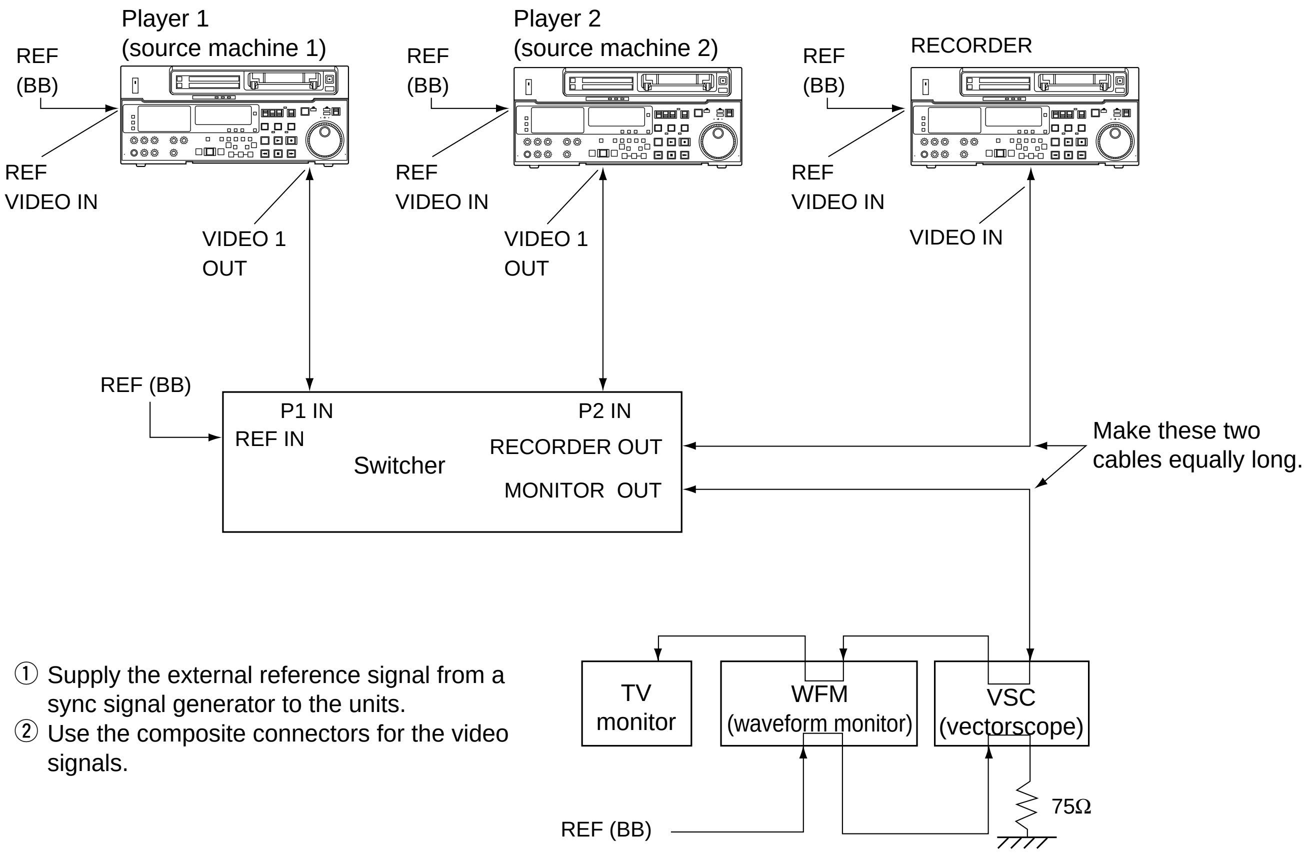

Reference Signal generator
Remote control signal (9P)
Source machine
OFF
Recorder
ON
To audio monitor device
To video monitor device
To audio monitor device
To video monitor device
Digital video/audio signal (option)
(Digital audio)
Analog video signal (component)

Connections with editing controller


Recorder
AV monitor
Video monitor signals
Audio monitor signals
To REMOTE IN/OUT connector
Remote
Video input signals
Audio input signals
Video monitor signals
Audio monitor signals
AV monitor
Editing controller
AV switcher
Reference signal generator
Remote
Video output signals
Audio output signals
Remote
Video output signals
Audio output signals
Reference signal
To REMOTE IN/OUT connector
To REMOTE IN/OUT connector
Reference signal
Source machine
Source machine
Video monitor signals
Audio monitor signals
Video monitor signals
Audio monitor signals
AV monitor
AV monitor

<Note>
When an editing controller made by CMX is used, support must be provided at the editing controller side.

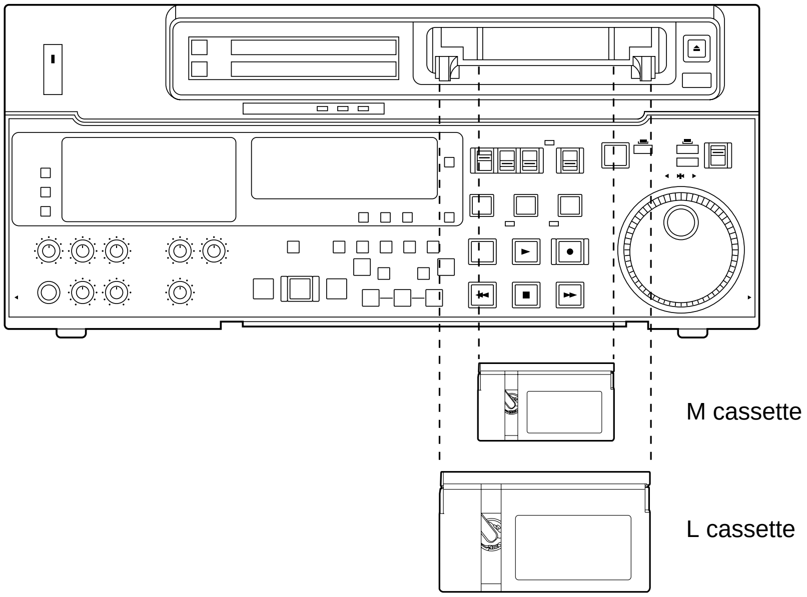
Connections for adjusting video output (encoder output) signals


Player 1
(source machine 1)
REF
(BB)
REF
VIDEO IN
VIDEO 1
OUT
Player 2
(source machine 2)
REF
(BB)
REF
VIDEO IN
VIDEO 1
OUT
RECORDER
REF
(BB)
REF
VIDEO IN
VIDEO IN
REF (BB)
P1 IN
P2 IN
REF IN
Switcher
RECORDER OUT
MONITOR OUT
Make these two cables equally long.
TV monitor
WFM (waveform monitor)
VSC (vectorscope)
75Ω
REF (BB)

① Supply the external reference signal from a sync signal generator to the units.
② Use the composite connectors for the video signals.

Type	Description
Consumer cassette (S cassette)	Tape designed exclusively for the camcorders used by consumers in general. Only playback is possible using the optional cassette adaptor. However, please note that long-play cassette tapes (80-minute standard/ 120-minute LP mode) cannot be used. **Use of Panasonic consumer DV cassette tapes is recommended.** Note that inserting a cassette tape without using the cassette adaptor can damage the unit.
M cassette	Recording/playback tape with a maximum capacity of 66 minutes. (AJ-P12MP, AJ-P24MP, AJ-P33MP, AJ-P46MP, AJ-P66MP)
L cassette	Recording/playback tape with a maximum capacity of 184 minutes. (AJ-P34LP, AJ-P66LP, AJ-P94LP, AJ-P126LP, AJ-5P92LP)

Align the cassette with the center of the insertion slot and push it in gently. The cassette tape is loaded automatically.



<Note>
For AJ-5P92LP cassette tapes recorded using the DVCPRO (25 Mbps) mode, use a VTR supporting DVCPRO (25 Mbps) 184 minute tapes.

<Cautions when playing back consumer DV tapes and DVCAM tapes>
- Consumer DV tapes and DVCAM tapes can be used for playback only.
- Consumer DV tapes which have been recorded in the LP mode cannot be played back.
- When materials which have been recorded on consumer DV tapes or DVCAM tapes are to be edited, record them onto a DVCPRO tape or tape of any other broadcasting VTR for use.
- Recordings cannot be made on consumer DV tapes and DVCAM tapes: this means that all functions related to recording, REC operation, editing selection and execution, TAPE/EE switching and other such operations are prohibited.
- The maximum transport speed for consumer DV tapes and DVCAM tapes is 32 times the normal tape speed.
- The maximum time for the STILL TIMER when consumer DV tapes or DVCAM tapes are used is set to 10 seconds, and the total STEP FWD time when the machine has been left standing in the STILL status is set to 1 minute.
- Slow-motion playback of consumer DV tapes and DVCAM tapes is not possible.
- In order to protect your tapes, it is recommended that repeated cue-up in the same location on a consumer DV tape or DVCAM tape be avoided as far as possible.
- Finally, check out the cautionary items for setup menu item No. 108 “FORMAT SEL”.

Switching on the power/inserting the cassette

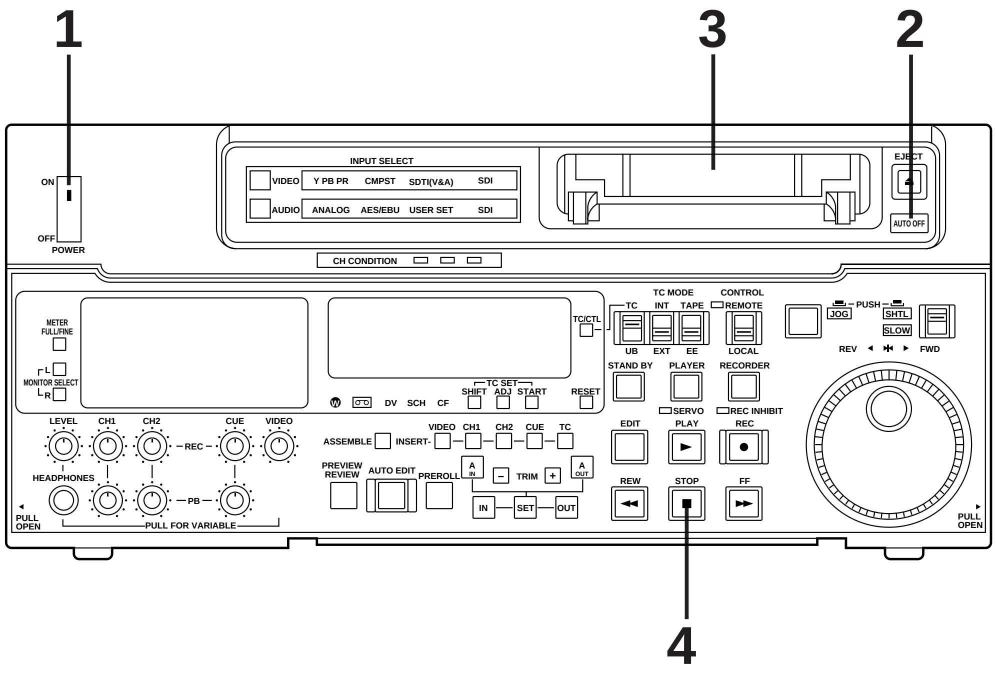
Before starting to operate the unit, check whether the equipment has been connected properly.

1 Turn on the power.

2 Check that the AUTO OFF lamp is off.
When condensation has formed or some other trouble has occurred, the AUTO OFF lamp lights, and all operations are disabled.

3 Insert the cassette tape.
Insert the tape at its proper position without force.

4 Check that the STOP lamp is on.
When the tape is inserted, the cylinder rotates automatically, the tape is loaded and the unit goes into the stop mode. The EJECT lamp goes off.


1
3
2
4
ON
OFF
POWER
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
DV
SCH
CF
TC SET
SHIFT
ADJ
START
RESET
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL FOR VARIABLE
PULL OPEN
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
–
TRIM
+
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN

STOP/STAND BY mode

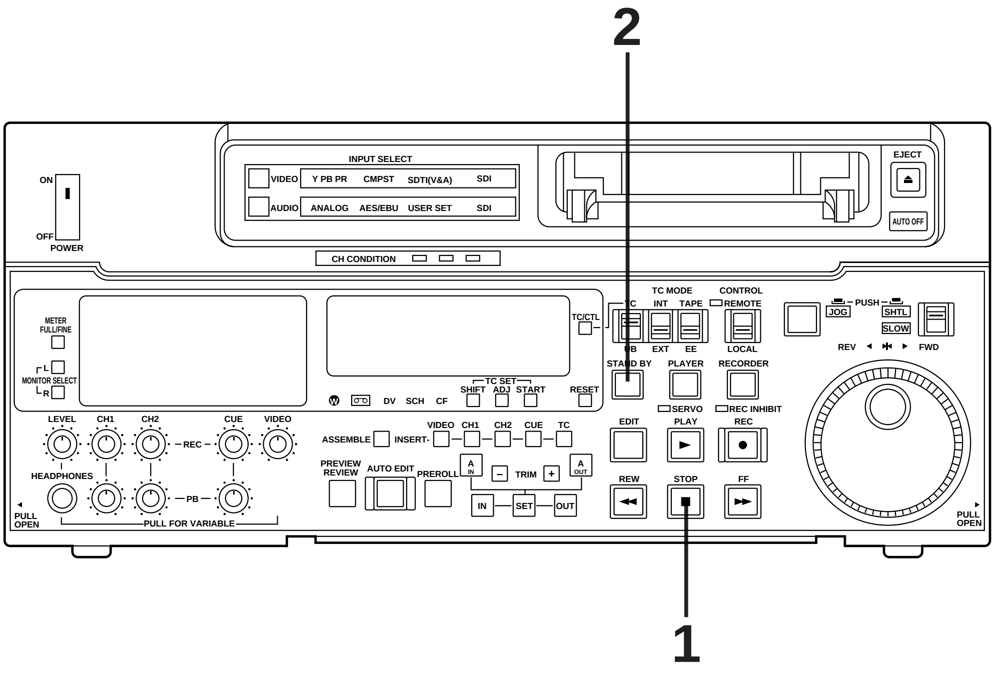
1 When the STOP button is pressed, the unit goes into the stop mode. The STOP lamp lights and the tape stops traveling.

- In order to protect the tape, the unit goes into the standby OFF mode after the time set by setup menu No. 400 (STILL TIMER) has elapsed. When the STOP, REW, FF or PLAY button is pressed, the unit will go into the appropriate mode.

2 When the STAND BY button is pressed, the unit goes into the standby ON/OFF mode. When the button's lamp is lighted, the unit is in the standby ON mode.
When the button is pressed during the stop mode, the unit goes into the standby OFF mode and half-loading mode and the lamp goes off.
When the button is pressed during the standby OFF mode, the unit goes to the standby ON mode.

Still Timer Setting

In order to protect the tape and VTR helical heads, it is recommended that the Still Timer be set for automatic tape protection mode in 30 seconds or under.
Page 67 indicates the settings for menu item 400-Still Timer set. Still Timer settings 4 and below will best protect the tape.


2
ON
OFF
POWER
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
PB
HEADPHONES
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
1

Recording

1 Set the accidental erasure prevention tab on the cassette tape to the “recording” position and insert the tape.

2 Press the STOP button to place the unit in the stop mode.

3 Set the TAPE/EE switch to EE.
EE images now appear on the TV monitor.

4 Check that the REC INHIBIT lamp is off.
If this lamp is lighted, set the REC INHIBIT switch to OFF.

5 Select the video and audio input signals and adjust their levels.

5-1 Selecting video/audio input signals

1. Connect the signals to be recorded.
2. Select the input signals using the INPUT SELECT switches on the front panel. The input signals corresponding to the lighted lamps have been selected.

5-2 Adjusting the video level

1. Normally, the adjustment control ㊹ for the video input level should be pressed in. (unity value)
   The video signals will be recorded at the proper level.
2. To adjust the recording level, pull out the adjustment knob and adjust in the +3 dB to –3 dB range.

5-3 Adjusting the audio level

1. Adjust the audio input signal levels of the analog audio CH1/CH2 signals and analog cue signal. Keep the audio input/output level controls ㊹ pushed in (unity value).
   The audio signals will be recorded at the proper level.
2. To adjust the recording level, pull out the controls and adjust them. With the CUE signal, adjust the control in such a way that –20 dB will not be exceeded.

6 Press the REC and PLAY buttons together. The REC and PLAY lamps light, and recording commences.

7 To end the recording, press the STOP button.
Recording is ended, and the unit goes into the stop mode.

<Notes>

- Check that the SERVO lamp is lighted during recording. If it flashes or if it is off, the images played back will be disturbed.
- Only the analog composite video input signals can be adjusted. (The digital video and analog component input signals cannot be adjusted.)
- The sound and pictures to be recorded are offset from the playback pictures by 5 frames and recorded. When, for instance, recording sound at a particular timing while the playback pictures are monitored, the sound to be recorded will be recorded at a position which is offset from the playback pictures by 5 frames.

Playback

1. Insert the cassette tape, and place the unit in the stop mode.

2. Press the PLAY button.
   Regular playback is now commenced.

3. Adjust the audio playback level.
   Pull out the audio level controls and turn them clockwise or counterclockwise to adjust the levels. Normally, they are kept in the pushed-in state (unity value).

4. To end playback, press the STOP button.
   The VTR now goes into the stop mode.

<Note>
Check that the SERVO lamp is lighted during playback. If it flashes or if it is off, the images played back will be disturbed.

Jog/shuttle

Jog mode

1. Push the search dial to the “in” position.
   Be sure that the JOG lamp lights.

2. Rotate the search dial.
   The dial’s clickstops are cleared, and the tape is played back at the speed corresponding to the speed at which the dial is turned. The maximum speed can be selected using the setup menu No. 320 (JOG FWD MAX) and No. 321 (JOG REV MAX) settings. When the dial rotation is stopped, a still picture appears. The playback picture is noise-free.

3. To transfer from the jog mode to another mode, press the appropriate button.

Shuttle mode

1. Push the search dial to release it from the “in” position. The SHTL lamp lights, and the unit goes into the shuttle mode.
   - Immediately after the power has been turned on, rotate the search dial and set it to the center position.

2. Set the SHTL/SLOW switch to SHTL or SLOW.

3. Rotate the search dial.
   When the SHTL/SLOW switch has been set to SHTL, the playback picture speed is varied from 0 to ±60× normal speed depending on the position of the dial. The playback picture speed can be switched to ±16×, ±32× and ±60× normal speed with setting menu No. 101 (SHTL MAX).
   The dial’s center position is a clickstop where a still picture appears as the playback image. When the SHTL/SLOW switch has been set to SLOW, the playback picture speed is varied from –4 to +4× normal speed depending on the position of the dial. The maximum speed can be selected using the setup menu No. 317 (VAR FWD MAX) and No. 318 (VAR REV MAX) settings. However, noise appears at speeds other than –0.43 to +1× normal speed.
   The dial’s center position is a clickstop where a still picture appears as the playback image. The playback picture is noise-free.

4. To transfer from the shuttle mode to another mode, press the STOP button or other button.

<Note>
When the unit leaves the factory, its operation is set up so that it will be transferred to the shuttle or jog mode when the search dial is rotated. If it is inconvenient for operation to be transferred to the variable-speed mode directly, it can also be transferred through the search button.
Set setting menu No. 100 (SEARCH ENA) to KEY.

Manual editing

1. Select the editing mode.

   ASSEMBLE: For assemble editing.
   INSERT: For insert editing.

2. Select the editing channel.
   In the case of insert editing, press the channel button corresponding to the signals to be edited, and check that its lamp is on.

3. Press the PLAY button.

4. Search for the position where the editing is to be commenced (IN point) while viewing the TV monitor, and press the PLAY and EDIT buttons together at the IN point.

5. Press the STOP or PLAY button at the position where editing is to be completed (OUT point) while viewing the TV monitor. The unit goes into the stop mode, and editing is completed.

<Note>
The sound and pictures to be recorded are offset from the playback pictures by 5 frames and recorded. When, for instance, recording sound at a particular timing while the playback pictures are monitored, the sound to be recorded will be recorded at a position which is offset from the playback pictures by 5 frames.

Preroll

1 Press the PREROLL button.

The VTR now performs the preroll operation.

- When the edit IN point has been entered, the tape is rewound from the edit IN point for the duration set by setting menu “000,” and the unit then goes into the stop mode.
- When the edit IN point has not been entered, the tape is rewound for the duration set by setting menu “000” from the position where the button was pressed, and the unit then goes into the stop mode.

<Notes>

- The time code or CTL signal must be continuously recorded between the edit IN point and preroll point.
- When the IN point has not been entered, whether to enter the IN point and perform preroll or to perform preroll without entering the IN point can be selected at setting menu No. 311 (AUTO ENTRY).

Automatic editing (Deck to Deck)

Editing refers to the job of using a prerecorded tape to produce a complete recording by joining together separate cuts and deleting unnecessary parts.

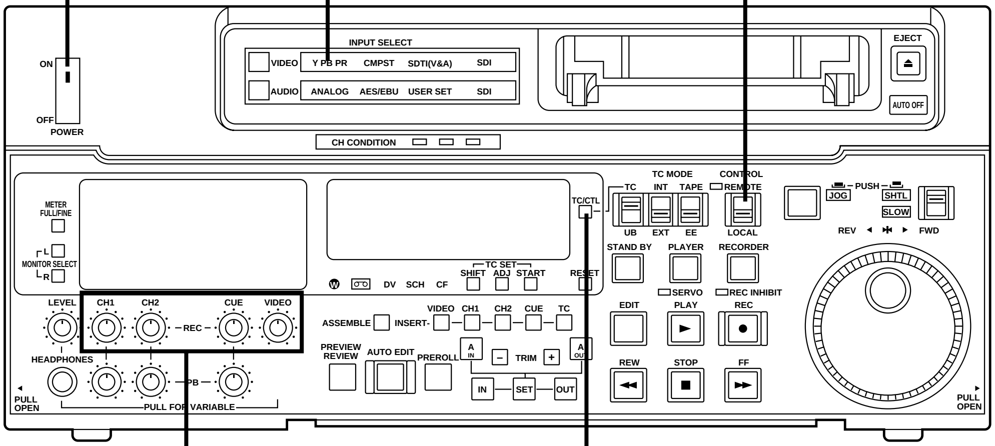
The basic steps taken for editing are as follows.

1. Set the CONTROL switch to REMOTE on the player and to LOCAL on the recorder.
2. Select the editing mode.
3. Enter the edit points of the recorder and player.
4. Check and modify the edit points.
5. Check (Preview) before proceeding with the editing.
6. Proceed with the editing.
7. Check (Review) the recording that has resulted from the editing.

Automatic editing

Switch settings and adjustments

When the unit is used as the recorder:


ON
OFF
POWER
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
JOG
PUSH
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
LEVEL
CH1
CH2
CUE
VIDEO
REC
PB
HEADPHONES
PULL FOR VARIABLE
PULL OPEN
ASSEMBLE
INSERT
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
A OUT
TRIM
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF

Set the POWER switch to ON.

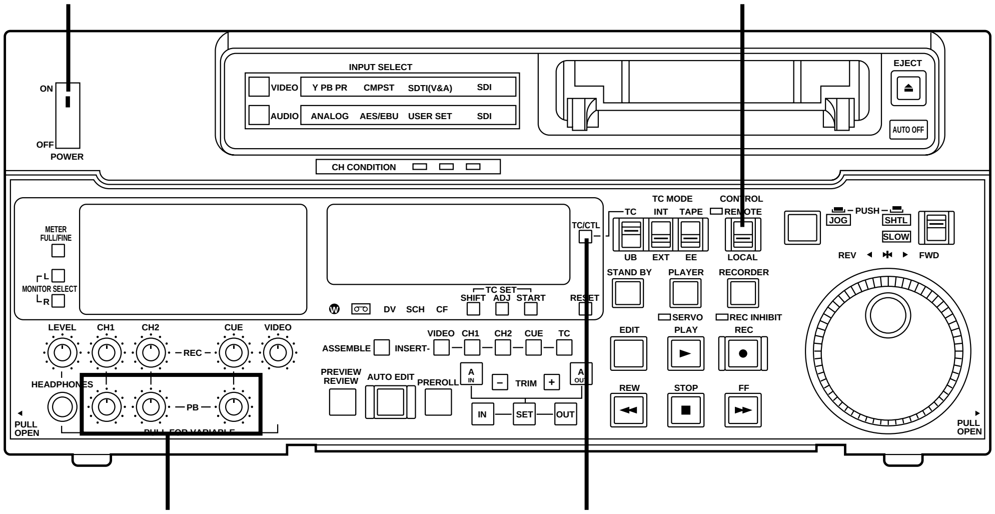
Select the video and audio input signals using the INPUT SELECT switches.

Set the CONTROL switch to LOCAL.

Adjust the recording level.

Set the time counter display to TC or CTL.

When the unit is used as the player:



Set the POWER switch to ON.

Set the CONTROL switch to REMOTE.

Adjust the playback level.

Set the time counter display to TC or CTL.

Select the editing mode

1 Select the editing mode.
For assemble editing, press the ASSEMBLE button.
For insert editing, press the INSERT button.

ASSEMBLE: The assemble editing mode (in which cuts are joined together) is established.

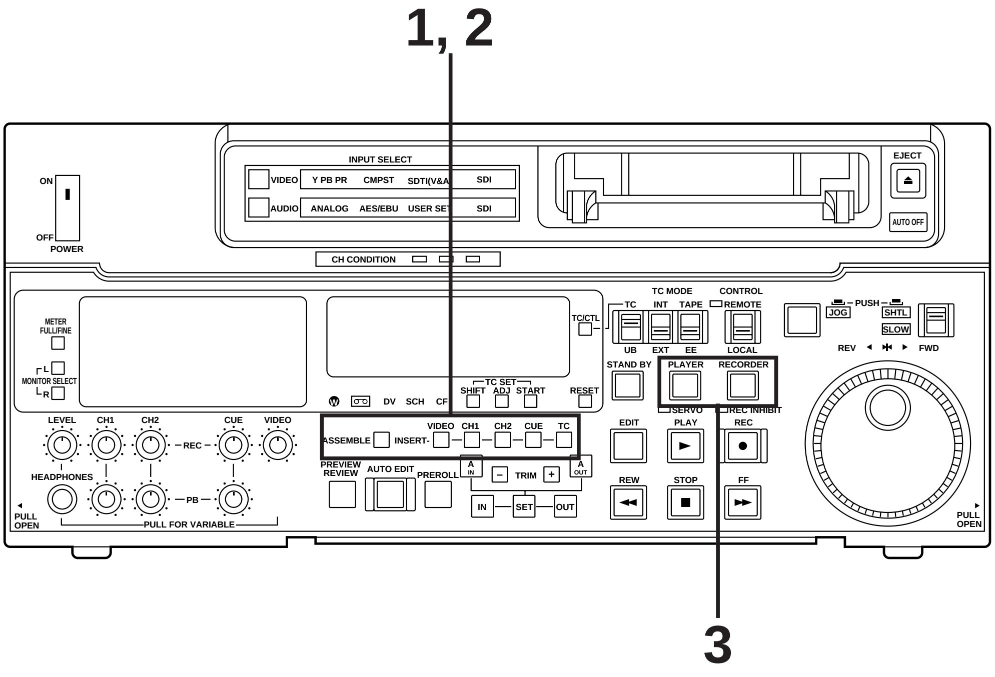
INSERT: The insert editing mode (in which cuts are inserted) is established.

2 Select the editing channel.
With assemble editing, the ASSEMBLE lamp lights.
With insert editing, press the button of the channel whose signals are to be edited and lights its lamp.

3 Select the VTR to be operated (this setting is performed when editing with 2 VTRs).
Press the PLAYER or RECORDER button to select the VTR.

PLAYER: Press this button to operate the player VTR and enter the edit points.

RECORDER: Press this button to operate the recorder VTR (this unit) and enter the edit points.


1, 2
3
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
CONTROL
TC
INT
TAPE
REMOTE
UB
EXT
EE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
DV
SCH
CF
TC SET
SHIFT
ADJ
START
RESET
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN

Automatic editing

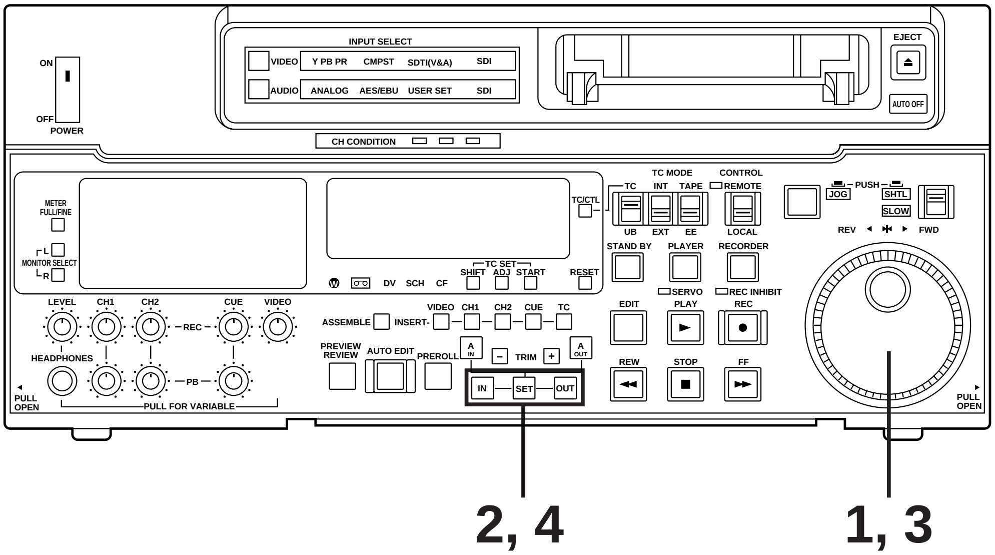
Entering the edit points

1. Search for the edit IN point by performing the jog or shuttle operation.
   Establish the still picture mode at the desired position.
   Refer to page 28 for details on the jog/shuttle operations.

2. Press the SET button while holding down the IN button.
   The edit IN point is now entered.
   The edit IN point value now appears on the display.

3. Search for the edit OUT point by performing the jog or shuttle operation.
   Establish the still picture mode at the desired position.
   Refer to page 28 for details on the jog/shuttle operations.

4. Press the SET button while holding down the OUT button.
   The edit OUT point is now entered.
   The edit OUT point value now appears on the display.



Match frame processing function
When using two VTRs for editing, a total of four edit points—namely, the player’s IN and OUT points and the recorder’s IN and OUT points—need to be entered. However, since the last edit point is calculated automatically, only three of these edit points must be entered.

Negative duration function
This function is used by combining setup menu No. 301 (IN/OUT DEL) and No. 302 (NEGA FLASH) described on page 63.

Checking the edit points

1 Press the IN (or OUT) button to check the edit point.
The value of the entered edit point appears on the display.

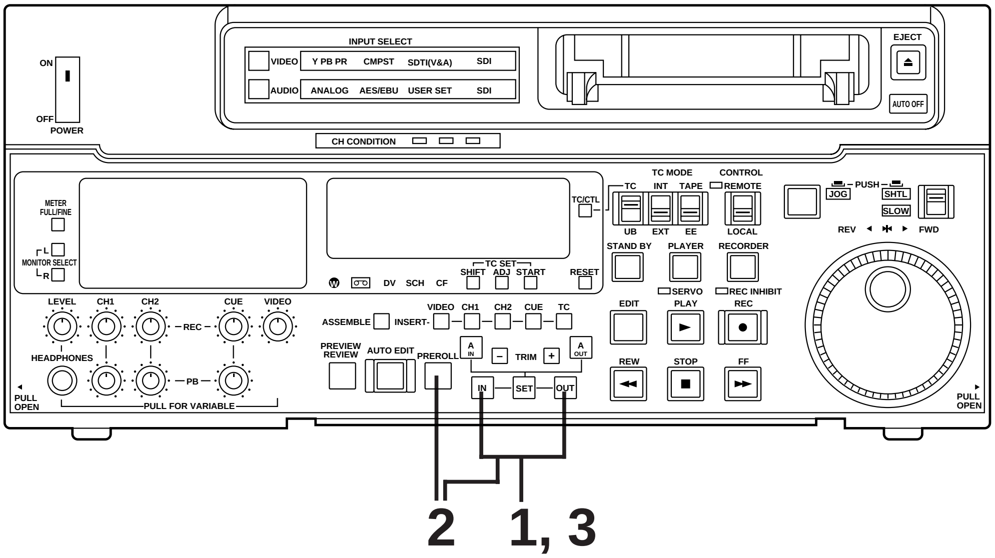
2 Press the PREROLL button while holding down the IN (or OUT) button to check the image at the edit point.
The tape is cued at the edit IN (or OUT) point, and the still picture mode at that point is displayed.

- The EE mode is established if the TAPE/EE switch has been set to the “EE” position when “STOP” has been selected for the setup menu No. 313 (AFTER CUE-UP).

3 Press and hold down the IN and OUT buttons together to check the edit duration.
The duration time appears on the display.

Calculating the duration

- When both edit points have been set, the duration between the two edit points.
- When only one edit point has been set, the duration between the set data and the current tape address.
- When neither edit point has been set, the duration of the previously edited interval.


INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
–
TRIM
+
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
2
1, 3

Modifying the edit points

1 Re-entering the edit points
Search for the new edit point by performing the jog or shuttle operation, and press the IN (or OUT) and SET buttons together to re-enter the edit point.

2 Modifying the edit point in frame units (trim function)
Press the TRIM button while holding down the IN (or OUT) button.
The edit point is put ahead by 1 frame each time the + button is pressed.
The edit point is put back by 1 frame each time the – button is pressed.

3 Resetting the edit points

3-1 Resetting both the edit IN and OUT points

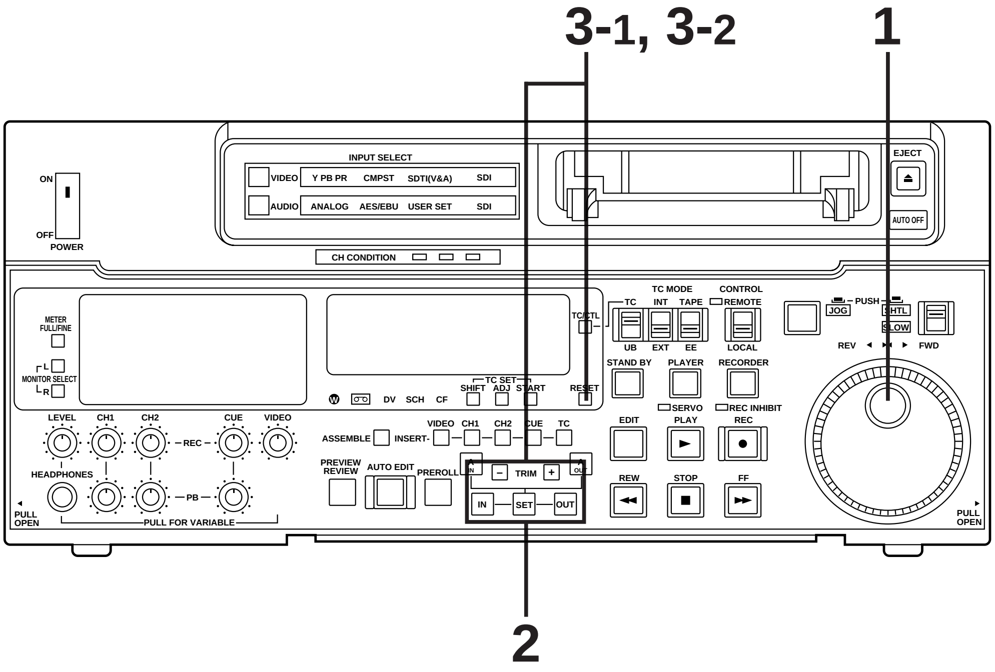
- Press the RESET button.

3-2 Resetting either the edit IN or OUT point

- Press the RESET button while holding down the IN (or OUT) button.

<Notes>

- Edit points can be reset only in the CTL mode.
- An edit OUT point can be reset even while editing is in progress.
- The IN and OUT points are automatically reset during the eject mode.

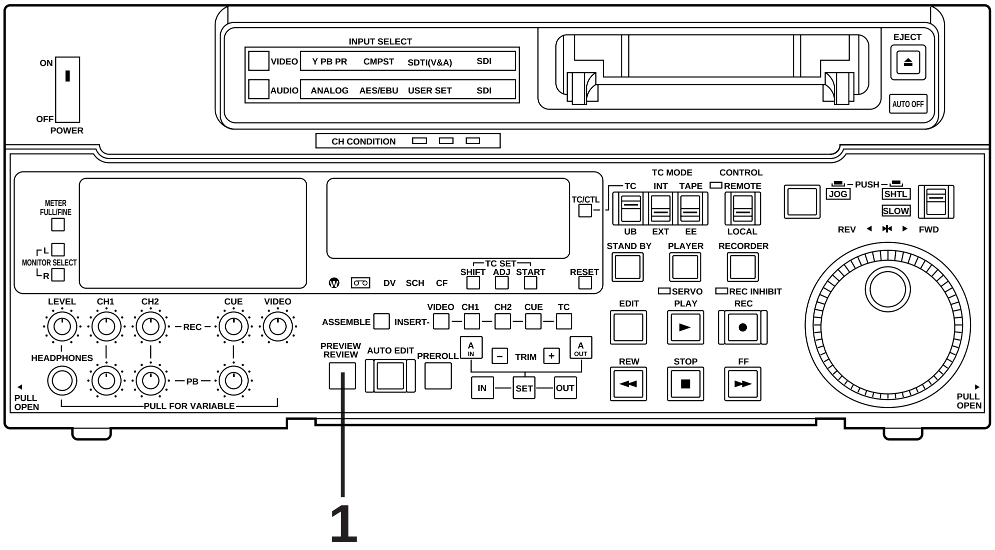

3-1, 3-2
1
2
INPUT SELECT
VIDEO Y PB PR CMPST SDTI(V&A) SDI
AUDIO ANALOG AES/EBU USER SET SDI
ON
OFF
POWER
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
MONITOR SELECT L R
TC/CTL
TC MODE
TC INT TAPE
UB EXT EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV FWD
DV SCH CF
TC SET
SHIFT ADJ START
RESET
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
LEVEL CH1 CH2 CUE VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT- VIDEO CH1 CH2 CUE TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
IN
– TRIM +
OUT
IN SET OUT
EDIT
PLAY
REC
REW
STOP
FF

Preview

1 After the edit points have been entered, press the PREVIEW button.
Normal preview is now performed.

<Notes>

- If the edit IN point has not been entered, the position where the PREVIEW button was pressed will be entered at the edit IN point.
- To stop the preview at any time, press the STOP button.
- If the PREVIEW button is pressed again while preview is in progress after the IN point, preview will start again from the beginning.
- When the edit OUT point is reached, the unit automatically goes into the stop mode.


INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
1

Automatic editing

Executing automatic editing

1 Press the AUTO EDIT button.
Automatic editing is now performed.

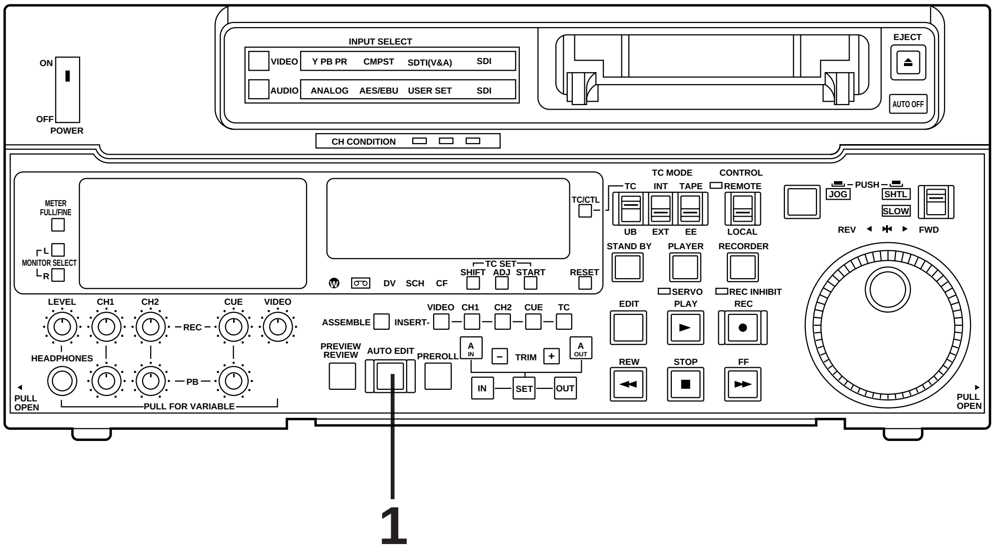
- To stop the editing at any time, press the STOP button.
- When the edit OUT point is reached, the unit goes into the stop mode after postrolling.

Postroll
With assemble editing, editing continues for approx. 2 seconds even after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.
With insert editing, the unit goes into the play mode after the edit OUT point has been passed, the tape is rewound to the OUT point, and the unit goes into the stop mode.

Retry function
If the AUTO EDIT button is pressed again after the STOP button has been pressed to stop the editing, editing will start again from the beginning.

Auto tag editing
If the AUTO EDIT button is pressed when the next edit point has not yet been entered upon completion of editing, the previous edit OUT point will be entered as the IN point, and editing is performed accordingly.
To release the auto tag mode, press one of the tape transport buttons (PLAY, etc.).

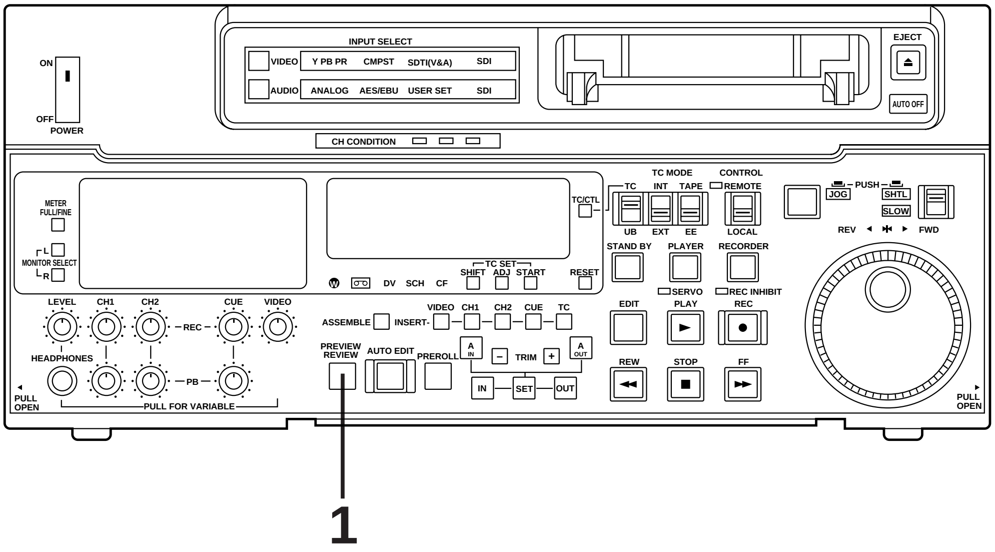
<Note>
The entered points are automatically cleared after editing is executed. However, the previous editing points can be recalled by pressing the TRIM+ (or TRIM–) and SET buttons together.


INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL FOR VARIABLE
PULL OPEN
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
1

Review

1 Upon completion of the editing, press the REVIEW button.
The review is started in the recorder.

- To stop the review at any time, press the STOP button.
- When the edit OUT point is reached, the unit goes into the stop mode after postrolling.



Split editing

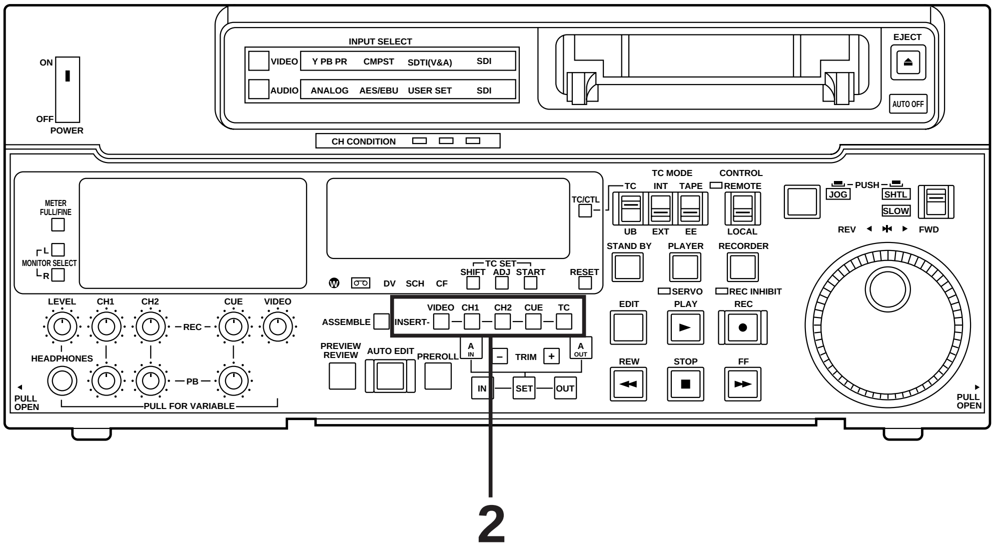
Split editing refers to editing where the editing channels are switched while insert editing is in progress.

1 Perform insert editing.

2 Switch the editing channel.
When, for instance, sound from AUDIO CH2 is to be additionally inserted during video channel insert editing:

2-1 Press the AUDIO CH2 button during video channel editing.
The lamp in the button lights and the AUDIO CH2 sound is insert edited.

2-2 Press the AUDIO CH2 button again and turn off the lamp in the button.
This completes the AUDIO CH2 insert editing.


INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
ASSEMBLE
INSERT-
VIDEO
CH1
CH2
CUE
TC
EDIT
PLAY
REC
HEADPHONES
PB
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
REW
STOP
FF
PULL OPEN
PULL FOR VARIABLE
PULL OPEN
2

Audio split editing

The video edit points and audio edit points can be entered separately, and they can be offset from each other and edited.
Audio edit points can be entered, deleted and revised only when the insert editing mode has been selected. After the edit points have been entered, follow the same operating procedure as that for insert editing.

■ Entering the edit points

Video IN point: Press the SET button while holding down the IN button.
Video OUT point: Press the SET button while holding down the OUT button.
Audio IN point: Press the SET button while holding down the A IN button.
Audio OUT point: Press the SET button while holding down the A OUT button.

■ Deleting the edit points

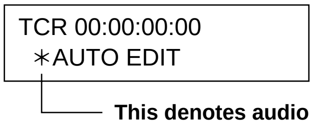
Video IN point: Press the RESET button while holding down the IN button.
Video OUT point: Press the RESET button while holding down the OUT button.
Audio IN point: Press the RESET button while holding down the A IN button.
Audio OUT point: Press the RESET button while holding down the A OUT button.

■ Modifying the edit points

Video IN point: Press the TRIM+ or TRIM– button while holding down the IN button.
Video OUT point: Press the TRIM+ or TRIM– button while holding down the OUT button.
Audio IN point: Press the TRIM+ or TRIM– button while holding down the A IN button.
Audio OUT point: Press the TRIM+ or TRIM– button while holding down the A OUT button.

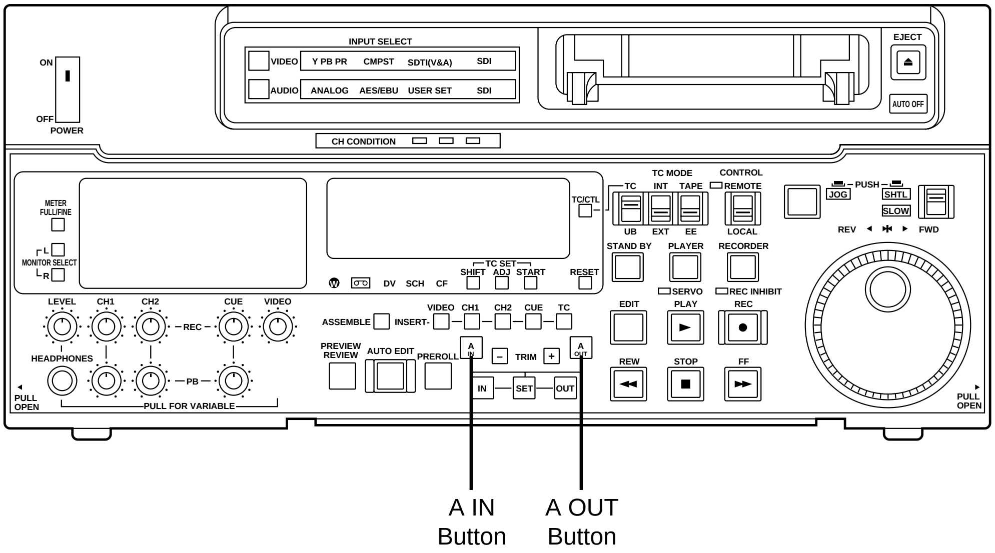
■ Indicating audio split editing

When the audio edit points are entered, " ∗ " appears superimposed on the front panel and TV monitor to denote audio split editing.



```
TCR 00:00:00:00
 ∗AUTO EDIT
```

This denotes audio split editing.

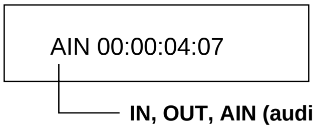

INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
L
MONITOR SELECT
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
STAND BY
PLAYER
RECORDER
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
ASSEMBLE
INSERT
VIDEO
CH1
CH2
CUE
TC
EDIT
PLAY
REC
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
REW
STOP
FF
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
PULL OPEN
A IN Button
A OUT Button

Audio split editing

■ Displaying the audio split edit points

The edit points are displayed on the front panel as shown below. (The figure shows an audio IN point.)

Operations
Video IN point: Press the IN button.
Video OUT point: Press the OUT button.
Audio IN point: Press the A IN button.
Audio OUT point: Press the A OUT button.



IN, OUT, AIN (audio IN point), AOUT (audio OUT point)

<Note>
If the editing mode is switched to assemble editing after audio edit points have been entered, these points will be deleted.

■ Cueing up the tape to the edit points

Cue-up to video IN point: Press the PREROLL button while holding down the IN button.
Cue-up to video OUT point: Press the PREROLL button while holding down the OUT button.
Cue-up to audio IN point: Press the PREROLL button while holding down the A IN button.
Cue-up to audio OUT point: Press the PREROLL button while holding down the A OUT button.

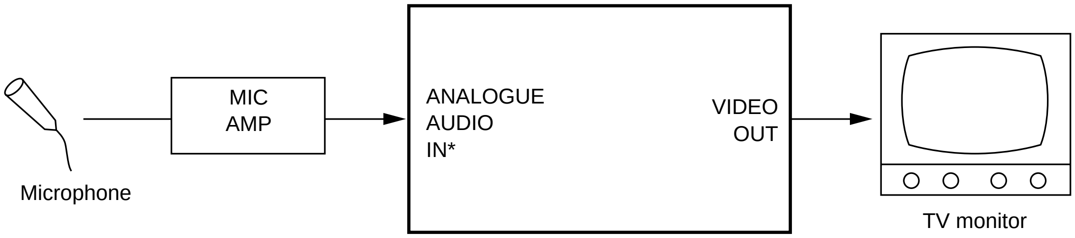
■ Duration display

The duration can be displayed on the front panel only.
Duration from video IN point to OUT point: Press the IN and OUT buttons simultaneously.
Duration from audio IN point to OUT point: Press the A IN and A OUT buttons simultaneously.

Match frame processing mechanism
When two VTRs are used for audio split editing operations, there will be a total of eight edit points: two pairs of video IN and OUT points, one for the player and the other for the recorder, and two pairs of audio IN and OUT points, one for the player and the other for the recorder. Since the remaining three points are automatically calculated when five of these eight edit points are entered, up to five edit points can be entered.

<Note>
If, during audio split editing, only the video OUT point (or audio OUT point) is entered and automatic editing is executed without the audio IN point (or video IN point) having been entered, editing will continue until the audio OUT point (or video OUT point) is entered or the STOP button is pressed to suspend operation.

Operating procedure 1



* Connect to the channel whose sound is to be recorded.

AJ-D850

1 Select INT_VO as the setup menu No. 322 (AUD MEM MODE) setting.

2 Select the same setting for the channel (CH1 or CH2) on which the sound is to be recorded and for the setup menu No. 323 (AUD MEM CH) channel.

3 Insert the cassette tape for which the voice-over editing is to be performed.

4 Press the insert button for the channel (CH1 or CH2) on which the sound is to be recorded and ensure that its lamp lights.

5 Press the PLAY button.

6 Search the position (IN point) where voice-over editing is to start while watching the TV monitor.

7 Press the IN and SET buttons simultaneously at the IN point.

8 Input the audio signals to be recorded to the channel which was selected in step 2.

9 Search the position (OUT point) where voice-over editing is to end while watching the TV monitor.

10 Press the A OUT and SET buttons simultaneously at the OUT point. The audio signals to be recorded are stored in the memory.

11 Press the STOP button.

12 Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>
The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

Operating procedure 2

1. Select INT_VO as the setup menu No. 322 (AUD MEM MODE) setting.
2. Select the same setting for the channel (CH1 or CH2) on which the sound is to be recorded and for the setup menu No. 323 (AUD MEM CH) channel.
3. Insert the cassette tape for which the voice-over editing is to be performed.
4. Press the insert button for the channel (CH1 or CH2) on which the sound is to be recorded and ensure that its lamp lights.
5. Enter the IN and OUT points of the positions where voice-over editing is to be performed.
6. Press the PREVIEW button.
7. While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel which was selected in step 2. The audio signals to be recorded are stored in the memory.
8. Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.
   <Note>
   The audio signals can be previewed prior to editing by pressing the PREVIEW button while the SET button is held down before the AUTO EDIT button is pressed.

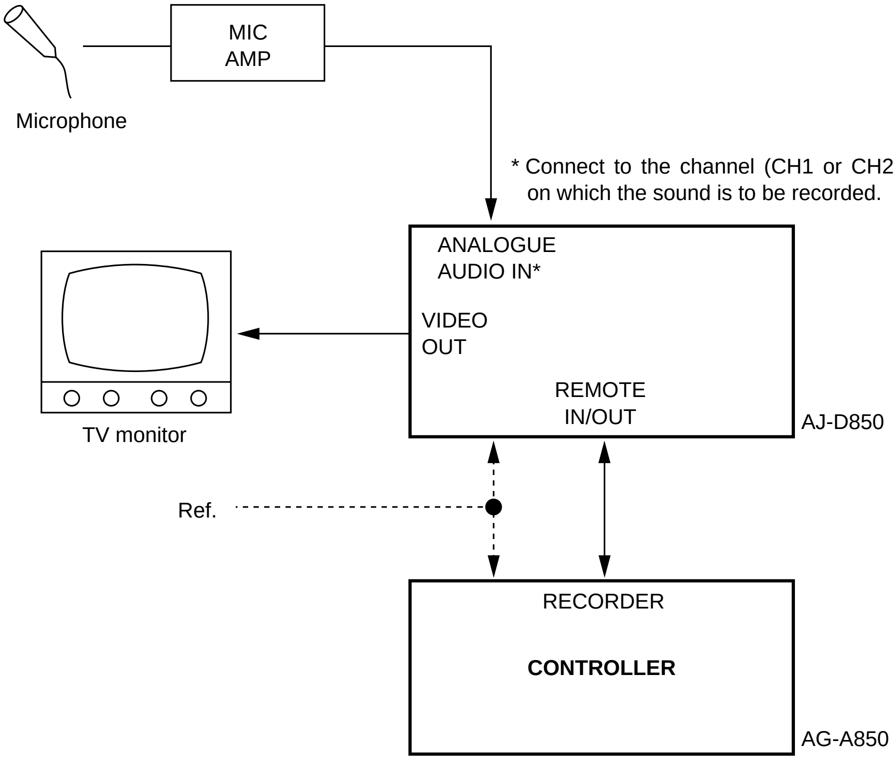
```
T∗R 00:00:00:00
m STOP
```

"m" indicates the edit mode in which the internal memory is used.

<Notes>
Memory capacity

- Up to 20 seconds of sound can be stored in the unit's internal memory. It should be borne in mind that even if an attempt is made to store more than 20 seconds of sound in the memory, all the audio signals in excess of the memory's 20-second capacity will fail to be stored.
- When INT_VO or INT_X, which is performed using the internal memory in the setup menu No. 322 (AUD MEM MODE) setting, "m" appears on the front panel and is superimposed onto the TV monitor display to indicate that the editing mode using the internal memory is now being used.

For operation with an editing controller (AG-A850)


MIC
AMP
Microphone
* Connect to the channel (CH1 or CH2) on which the sound is to be recorded.
ANALOGUE
AUDIO IN*
VIDEO
OUT
REMOTE
IN/OUT
AJ-D850
TV monitor
Ref.
RECORDER
CONTROLLER
AG-A850

1. Select INT_VO as the setup menu No. 322 (AUD MEM MODE) setting.
2. Select the same setting for the channel (CH1 or CH2) on which the sound is to be recorded and for the setup menu No. 323 (AUD MEM CH) channel.
3. Insert the cassette tape for which the voice-over editing is to be performed into the VTR.
4. Set the CONTROL switch on the VTR to the REMOTE position.
5. Set the controller’s SOURCE selector to AUX1.
6. Press the insert button for the channel (CH1 or CH2) on which the sound is to be recorded.
7. Enter the IN and OUT points of the positions where voice-over editing is to be performed.
8. Press the PREVIEW button.
9. While watching the TV monitor, input the audio signals to be recorded between the IN point and OUT point into the channel that was selected in step 6. The audio signals to be recorded are stored in memory.
10. Press the AUTO EDIT button to proceed with editing. The audio signals stored in the memory are recorded from the memory onto the cassette tape.

<Note>
For further details on the AG-A850, refer to the operating instructions of the AG-A850.

Audio cross channel editing (internal)

Example: To record cross-faded audio signals onto CH2

■ **Connections**

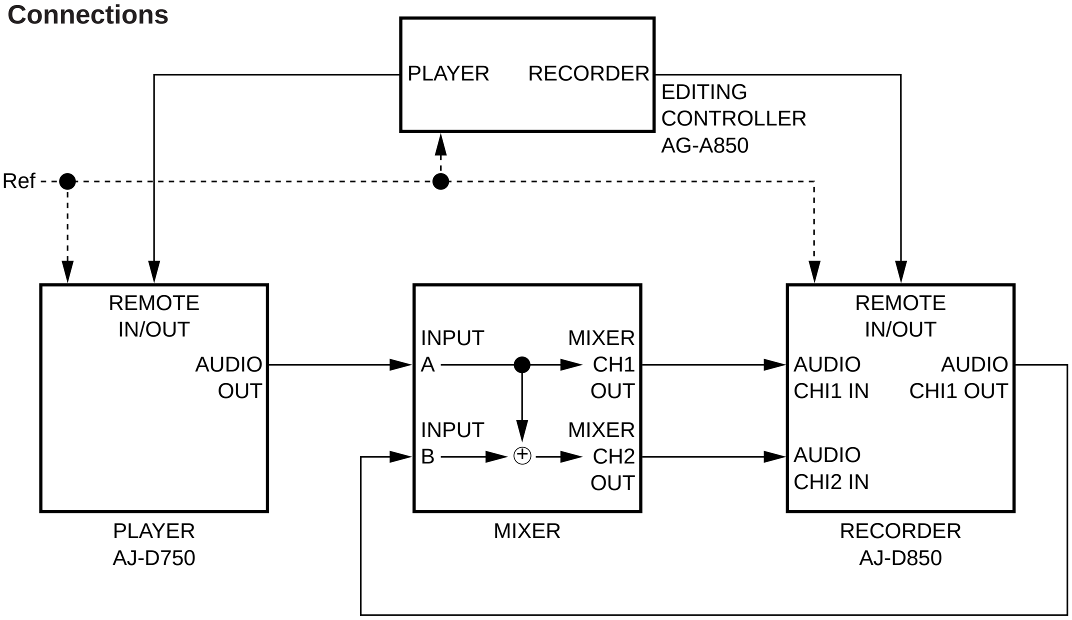
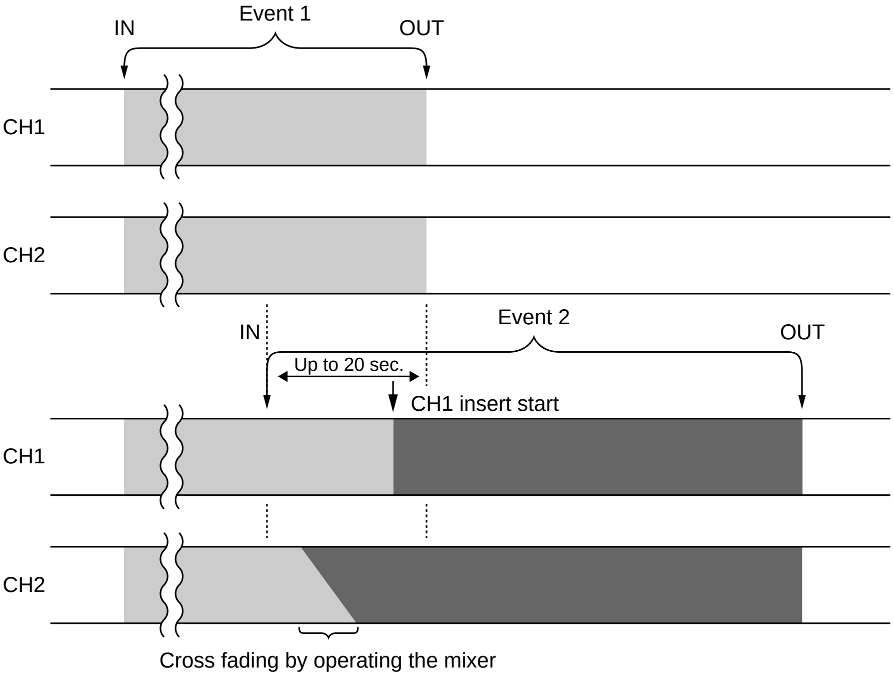

PLAYER
RECORDER
EDITING
CONTROLLER
AG-A850
Ref
REMOTE
IN/OUT
AUDIO
OUT
PLAYER
AJ-D750
INPUT
A
INPUT
B
MIXER
CH1
OUT
MIXER
CH2
OUT
MIXER
REMOTE
IN/OUT
AUDIO
CHI1 IN
AUDIO
CHI1 OUT
AUDIO
CHI2 IN
RECORDER
AJ-D850

Fig. 1

Fig. 2


IN
Event 1
OUT
CH1
CH2
IN
Event 2
OUT
Up to 20 sec.
CH1 insert start
CH1
CH2
Cross fading by operating the mixer

1 Select INT_X as the setup menu No. 322 (AUD MEM MODE) setting.

2 Select CH2 as the setup menu No. 323 (AUD MEM CH) setting.

3 Select the audio CH1 and CH2 in the insert editing.
<Note>
Select the video as well if the video signals are also going to be edited.

4 Enter the edit points of the first event on the player’s tape.

5 Enter the edit points of the first event on the recorder’s tape.

6 Operate the mixer in such a way that the player’s audio output signals are output from the mixer’s CH1 OUT and CH2 OUT connectors. (The same audio signals will be delivered through CH1 and CH2 of the mixer.)

7 Press the AUTO EDIT button. The first event is now recorded on the recorder’s tape. (See Fig. 1.)
The last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory.

8 Release the insert button for CH1 so that only the insert button for CH2 is engaged.
<Note>
Select the video as well if the video signals are also going to be edited.

9 Enter the edit point of the next event on the player’s tape.

10 Enter the edit point of the next event on the recorder’s tape.
<Note>
The IN point must be set up to 20 seconds (more than the cross fading duration) before the previous edit OUT point.

11 Operate the mixer in such a way that the player’s audio output signals are output from the mixer’s CH1 OUT connectors and that the recorder’s (this unit) CH1 OUT audio signals are output from the mixer’s CH2 OUT connectors. [The recorder’s (this unit) CH1 OUT signals are the audio signals supplied from the internal memory.]

12 Press the AUTO EDIT button.

13 Operate the mixer starting at the IN point, and change the mixer’s CH2 OUT signals gradually from the recorder’s CH1 OUT audio signals into the player’s audio output signals for the mixer’s CH2 OUT connectors. (Cross fading)

14 Press the CH1 insert button after the mixer’s CH2 output signals have been changed into the player’s audio output signals. The STOP mode is established at the OUT point, and the last 20 seconds (which is the capacity of the memory) of the audio signals before the OUT point are now saved in the memory. (See Fig. 2.)

15 To continue editing, repeat steps 8 to 14.

<Notes>
Before attempting to perform voice-over editing or audio cross channel editing using the audio memory unit (AJ-YA752, option), proceed with the following settings for the unit (AJ-D850).

1. Select either AMU_X or AMU_VO as the setup menu No. 322 (AUD MEM MODE) setting.
2. For audio cross channel editing, set the channel on which the signals are to be recorded on setup menu No. 323 (AUD MEM CH).
3. Proceed with operation, using the AJ-YA752 operating instructions as a reference.

■ Additional line recording/playback function

- Select the mode for recording signals in additional lines using setup menu item No. 800 (ADD LINE).

Off:	No signals are recorded in additional lines.
YC422:	The input signals are recorded in 1 line in the 422 mode.
YC411:	The input signals are recorded in 1 line in the 411 mode.
Y1_B/W:	The input signals are recorded in 1 line in their original form as the luminance signal.
Y1_PBF:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the Y signal is recorded in 1 line.
C1:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the C signal is recorded in 1 line.
Y2_B/W:	The input signals are recorded in 2 lines in their original form as the luminance signal.
Y2_PBF:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the Y signal is recorded in 2 lines.
C2:	The input signals are separated into the Y (luminance) and C (chrominance) signals, and only the C signal is recorded in 2 lines.

- Select the additional lines for recording on the sub-menu screen.
- The number of lines in which the teletext signals can be recorded differs depending on which mode for recording the signals in the additional lines has been selected.

■ Teletext signal recording/playback function

- Up to 28 lines per frame of the teletext signals which are input can be recorded and played back.
- The number of lines in which the signals can be recorded differs depending on the setup menu item No. 800 (ADD LINE) setting.
- Depending on the setup menu item No. 800 (ADD LINE) setting, it may not be possible to record the input teletext signals in all of the lines.
- Listed below are the numbers of lines per frame in which the signals can be recorded in each mode.

Mode	Additional lines	Teletext signals
Off	0 line/frame	28 lines/frame
YC422	1 line/frame	15 lines/frame
YC411	1 line/frame	20 lines/frame
Y1_B/W	1 line/frame	28 lines/frame
Y1_PBF	1 line/frame	28 lines/frame
C1	1 line/frame	28 lines/frame
Y2_B/W	2 lines/frame	15 lines/frame
Y2_PBF	2 lines/frame	15 lines/frame
C2	2 lines/frame	15 lines/frame

<Note>
There is some limitation to the number of lines in which signals can be recorded with the recording and playback function of the V blanking data.

Video output (encoder output) signal adjustments

After this system has been connected, the video output signal (ENCODER OUT) must be adjusted if AB roll editing (editing using two source machines) using an editor, for instance, is to be error-free and accurate. (This adjustment must be repeated when one of the connecting cables has been replaced and whenever the connections are changed.)

The adjustment procedure using this unit is outlined below.

1 Check the connections. (See page 22.)

2 Set the REMOTE/LOCAL switch ㉒ on the front panel bottom section to the adjustment position (LOCAL).

REMOTE: For adjusting the video output signals using an external encoder remote controller.

LOCAL: For adjusting the video output signals using this unit.

3 Adjust the source machine independently.

3-1 When using the preset values

Set the PRESET/MANUAL switches of the VIDEO LEVEL, CHROMA LEVEL, SETUP and HUE controls to PRESET.

3-2 When adjusting the video output signals without using the preset values

1. Play back a cassette tape on which standard color bar signals have been recorded.
2. Adjust the controls in such a way that the waveforms on the waveform monitor (WFM) and vectorscope (VSC) resemble those shown in the figures below.

A **Setup level**

Adjust the control to eliminate deviation.

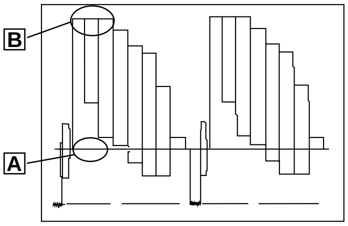
B **Video level**

Adjust this level to 100 IRE.

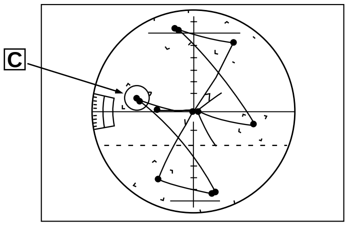
C **Chroma level and hue**

Adjust the two controls in such a way that the light spot of the vector waveforms comes inside the rectangular grid mark.

■ Waveform on WFM



■ Waveform on VSC



4 Perform the same adjustments on the source machine connected to the unit.

Setup (default settings)

The unit's major settings are performed by making selections on menus.
The setting menus appear on the TV monitor when the TV monitor and VIDEO OUT 3 connector in the unit's connector area are hooked up.

Changing the settings

1 Press the MENU button.
The setup menu appears on the TV monitor and setup menu No. appears on the counter display. (If the setup has already been performed, the screen showing the changes made last will appear.)

2 Rotate the search dial and select the item to be set.
The cursor (∗) on the menu screen moves and the item No. on the display flashes.

- When the dial is rotated clockwise, the item No. is incremented from 001→002→003→004 and so on; when it is rotated counterclockwise, the item No. is decremented.
- The search dial should be used in jog mode if at all possible.
- Hold down the PLAY button and press the FF (next major item) or REW (previous major item) buttons to select the menu by major item.

3 While holding down the search button, rotate the search dial at the position where the change is to be made.
The setting No. now flashes.
When the dial is rotated clockwise, the setting value is incremented; when it is rotated counterclockwise, it is decremented.

4 Release the search button when the setting is completed.
The setting value on the menu screen and display flashes.

- During the SHTL mode, the item moves if the search dial is not at the STILL position.

5 Repeat steps 2 through 4 to change another item.

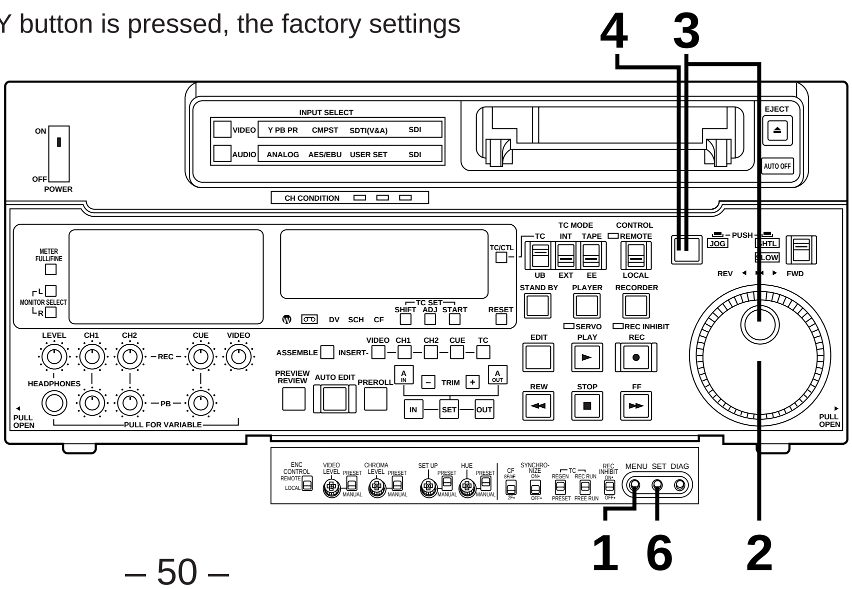
6 Press the SET button.
The changes are now stored in the memory.

- To return the items to the settings established before the changes were made, press the MENU button.

To return the setup settings to the factory (default) settings, press the RESET button while the menu is displayed. **The following message will now appear:**

```
SETUP-MENU INIT SET
YES<PLAY>/NO<STOP>
```

When the PLAY button is pressed, the factory settings are restored.



4
3
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
ON
OFF
POWER
EJECT
AUTO OFF
CH CONDITION
METER FULL/FINE
MONITOR SELECT
L
R
TC/CTL
TC MODE
TC
INT
TAPE
UB
EXT
EE
CONTROL
REMOTE
LOCAL
PUSH
JOG
SHTL
SLOW
REV
FWD
TC SET
SHIFT
ADJ
START
RESET
DV
SCH
CF
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
LEVEL
CH1
CH2
CUE
VIDEO
REC
HEADPHONES
PB
PULL OPEN
PULL FOR VARIABLE
VIDEO
CH1
CH2
CUE
TC
ASSEMBLE
INSERT
PREVIEW REVIEW
AUTO EDIT
PREROLL
A IN
TRIM
A OUT
IN
SET
OUT
EDIT
PLAY
REC
REW
STOP
FF
PULL OPEN
ENC CONTROL
REMOTE
LOCAL
VIDEO LEVEL
PRESET
MANUAL
CHROMA LEVEL
SET UP
HUE
CF
SYNCHRO-NIZE
TC
REGEN
REC RUN
PRESET
FREE RUN
REC INHIBIT
MENU
SET
DIAG
1
6
2

<Note>

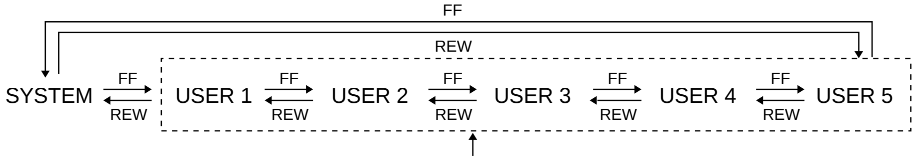
- When the RESET button is pressed to return to the factory settings, the factory settings are restored only for the user file currently being used and other user files are not affected.
- The changed SYSTEM menu contents are recorded even if the MENU button is pressed.

This unit can store up to 5 user files (user 1 to user 5) containing different menu settings, and these files can be selected and used.

Changing the file

1 Press the MENU button.

2 Hold down the STAND BY button and press the FF button to switch to the next user file. Hold down the STAND BY button and press the REW button to switch to the previous user file.



USER FILE
Each user file contains the following items.

- BASIC
- OPERATION
- INTERFACE
- EDIT
- TAPE PROTECT
- TIME CODE
- VIDEO
- AUDIO
- V BLANK
- MENU

3 Repeat the operation in step 2 to select the user file to be used and press the SET button. The user file is changed and stored in the memory.

<Note>
SYSTEM menu items are not included in user files 1 to 5.
Therefore, after selecting the user file, switch to the SYSTEM file and set the SYSTEM menu items.

Lock mode can be set to protect the settings in the system files and user files (USER2 – USER5). Settings can no longer be changed when this mode is set.
To set and release the lock mode for the system files and user files use setup item No. 30 (MENU LOCK) and setup menu item No. A03 (MENU LOCK), respectively.

Setting and releasing the lock mode.

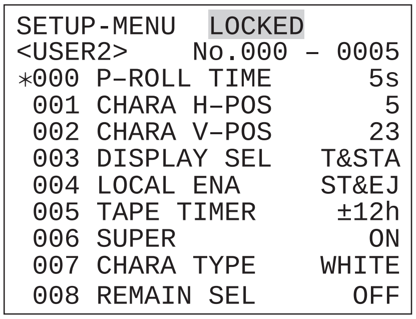
1. Press the MENU button.

2. While holding down the STAND BY button, press the REW or FF button, and select the file for which the lock mode is to be set or released.

3. Turn the search dial and move the cursor (∗) on the menu screen to setup item No. 30 (MENU LOCK) or setup menu item No. A03 (MENU LOCK) for the system or user file.

4. While holding down the search button, turn the search dial and select lock mode setting or release.
   To set the lock: Select the 0001 (ON) setting.
   To release the lock: Select the 0000 (OFF) setting.

   When the lock has been set, “LOCKED” flashes on the menu screen. In addition, the counter display stops flashing and lights.

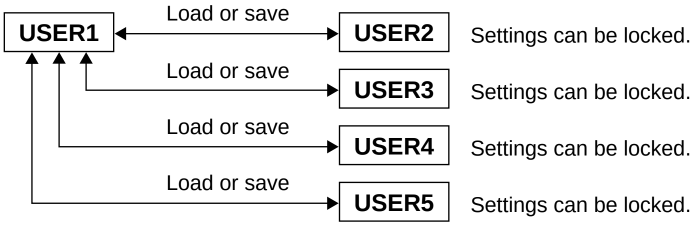


```
SETUP-MENU  LOCKED
<USER2>    No.000 – 0005
∗000 P–ROLL TIME      5s
 001 CHARA H–POS       5
 002 CHARA V–POS      23
 003 DISPLAY SEL   T&STA
 004 LOCAL ENA     ST&EJ
 005 TAPE TIMER     ±12h
 006 SUPER            ON
 007 CHARA TYPE    WHITE
 008 REMAIN SEL      OFF
```

5. Press the SET button. The setting is now stored in the memory.

<Notes>
- The lock mode cannot be set for the USER1 file settings.
- Even if the RESET button is pressed, the files which has been set to the lock mode cannot be reset to the factory settings.

The contents of the USER2 – USER5 files can be copied (loaded) into the USER1 file. In addition, the contents of the USER1 file can be copied (saved) to the USER2 – USER5 files.

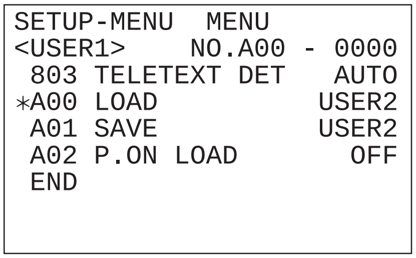

USER1
Load or save
USER2
Settings can be locked.
Load or save
USER3
Settings can be locked.
Load or save
USER4
Settings can be locked.
Load or save
USER5
Settings can be locked.

Loading a user file

1. Press the MENU button.

2. While holding down the STANDBY button, press the REW or FF button, and select USER1.

3. Turn the search dial and move the cursor (∗) on the menu screen to setup item No. A00 (LOAD).

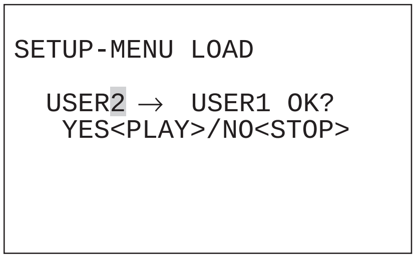


```
SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
 803 TELETEXT DET   AUTO
∗A00 LOAD          USER2
 A01 SAVE          USER2
 A02 P.ON LOAD       OFF
 END
```

4. While holding down the search button, turn the search dial and select the user file whose contents are to be loaded into USER1.

5. Press the SET button. The following messages appear on the menu screen and counter display.

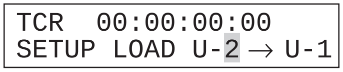
Menu screen



```
SETUP-MENU LOAD

  USER2 →  USER1 OK?
   YES<PLAY>/NO<STOP>
```

Counter display



```
TCR  00:00:00:00
SETUP LOAD U-2 → U-1
```

The user file number selected in step 4 is displayed in the shaded area.

6. Press the PLAY button. The settings of the user file selected in step 4 are loaded, and the USER1 menu display appears. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.

7. Turn the search dial and move the cursor (∗) on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).

8. Press the SET button. The USER1 settings are now stored in the memory.
   If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Saving a user file

1 Press the MENU button.

2 While holding down the STAND BY button, press the REW or FF button, and select USER1.

3 Turn the search dial and move the cursor (∗) on the menu screen to setup item No. A01 (SAVE).

```
SETUP-MENU  MENU
<USER1>    NO.A00 - 0000
 803 TELETEXT DET   AUTO
 A00 LOAD          USER2
∗A01 SAVE          USER2
 A02 P.ON LOAD       OFF
 END
```

4 While holding down the search button, turn the search dial and select the user file into which the USER1 contents are to be saved. User files which have been set to the lock mode are not displayed. When all the user files have been set to the lock mode, the “LOCKED” display appears and the contents cannot be saved.

5 Press the SET button. The following messages appear on the menu screen and counter display.

Menu screen

```

SETUP-MENU SAVE

  USER1 →  USER2 OK?
   YES<PLAY>/NO<STOP>
```

Counter display

```
TCR  00:00:00:00
SETUP SAVE U-1 → U-2
```

The user file number selected in step 4 is displayed in the shaded area.

6 Press the PLAY button. The contents of the USER1 file are saved in the user file which was selected in step 4 and stored in the memory. When the STOP button is pressed, the USER1 menu display appears while the settings remain unchanged.

7 Turn the search dial and move the cursor (∗) on the menu screen to any setup item except No. A00 (LOAD) and No. A01 (SAVE).

8 Press the SET button. The USER1 settings are now stored in the memory.
If the USER1 settings are not going to be stored in the memory, do not press the SET button but press the MENU button.

Automatic loading of user file when the power is turned on

When the user file to be loaded is selected in advance using setup menu item No. A02 (P.ON LOAD), it can be automatically loaded into USER1 when the power is turned on.

SYSTEM menu

<SYSTEM>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
00	SYS SC	0000 ⋮ 0127 ⋮ 0255	–127 ⋮ 0 ⋮ 128	System phase adjustment: Total variable range: ±180° or more –: Advanced +: Delayed **<Note>** If setting operation is performed, the setting value does not return to factory (default) setting.
01	SYS H	0000 ⋮ 0032 ⋮ 0060	–30 ⋮ 0 ⋮ 30	System phase adjustment: SC cycle phase (280 ns steps) –: Advanced +: Delayed **<Note>** If setting operation is performed, the setting value does not return to factory (default) setting.
02	VIDEO PHASE	0000 ⋮ 0032 ⋮ 0064	–32 ⋮ 0 ⋮ 32	Video phase adjustment: 148 ns steps –: C advanced +: C delayed
03	YC COARSE	0000 ⋮ 0002 ⋮ 0004	–2 ⋮ 0 ⋮ 2	YC timing rough adjustment: 148 ns steps –: C advanced +: C delayed
04	YC FINE	0000 ⋮ 0002 ⋮ 0004	–2 ⋮ 0 ⋮ 2	YC timing fine adjustment: 37 ns steps –: C advanced +: C delayed (The digital OUT option YC does not change.)
05	SCH COARSE	0000 0001 0002 0003	0 90 180 270	SCH phase adjustment: 90° units (The S and C phases change but the H phase does not change.)
06	SCH FINE	0000 ⋮ 0128 ⋮ 0255	–124 ⋮ 0 ⋮ 123	SCH phase adjustment: Total variable range: ±45° or more (The S and C phases change but the H phase does not change.)
07	PB OUT LV	0000 ⋮ 0124 ⋮ 0247	–124 ⋮ 0 ⋮ 123	Component PB output level adjustment: Total variable range: ±3 dB
08	PR OUT LV	0000 ⋮ 0124 ⋮ 0247	–124 ⋮ 0 ⋮ 123	Component PR output level adjustment: Total variable range: ±3 dB

The underline on the setting item denotes the initial setting.

SYSTEM menu

<SYSTEM> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
10	AV PHASE	0000 ⋮ 0128 ⋮ 0255	–128 ⋮ 0 ⋮ 127	This adjusts the audio output phase with respect to the video output: 20.8 µs steps –: The audio output phase is advanced with respect to the video output. +: The audio output phase is delayed with respect to the video output.
20	SYS H RANGE	0000 0001	FULL FINE	This selects the adjustable range for SYSTEM H during when the ENCODER REMOTE is connected. 0: ±8 µ sec (±30 steps) 1: –1.9 to +2.7 µ sec (–7 to +10 steps) **<Note>** If setting operation is performed, the setting value does not return to factory (default) setting.
21	SYS H OFFSET	0000 0001 0002 0003 0004 0005 0006	–3 –2 –1 0 1 2 3	System phase adjustment: 4.48 µs steps 0: –13.4 µ sec 1: –8.96 µ sec 2: –4.48 µ sec 3: 0 sec 4: +4.48 µ sec 5: +8.96 µ sec 6: +13.4 µ sec **<Note>** Factory settings will remain unchanged even if an attempt is made to perform a setting operation.
30	MENU LOCK	0000 0001	OFF ON	This selects whether the system file lock mode is to be engaged or released. 0: The lock is released (file data can be changed). 1: The lock is engaged (file data cannot be changed).

The underline on the setting item denotes the initial setting.

USER menu

<BASIC>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
000	P-ROLL TIME	0000 ⋮ 0005 ⋮ 0015	0S ⋮ 5S ⋮ 15S	This sets the preroll time which can be set from 0 to 15 seconds in 1-second increments. **<Note>** When the unit is set to automatic editing [PREVIEW, AUTO EDIT], the unit will not operate if the preroll time is set to 0 seconds.
001	CHARA H-POS	0000 ⋮ 0005 ⋮ 0011	0 ⋮ 5 ⋮ 11	This sets the position of the characters on the horizontal plane for the time code and other super displays output to the VIDEO OUT 3 connector. **<Notes>** 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3 according to the status set in the menu. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
002	CHARA V-POS	0000 ⋮ 0018 ⋮ 0022	0 ⋮ 18 ⋮ 22	This sets the position of the characters on the vertical plane for the time code and other super displays output to the VIDEO OUT 3 connector. **<Notes>** 1. When setting this item, the DISPLAY SEL status is output to VIDEO OUT 3 even if SUPER OFF has been set. However, when the menu is exited, operation complies with the SUPER OFF/ON setting. Also, CHARA TYPE is output to VIDEO OUT 3 according to the status set in the menu. 2. When the DISPLAY SEL setting causes characters to extend beyond the edges of the screen, the setting value is changed so that the characters are automatically displayed in a position on the screen.
003	DISPLAY SEL	0000 0001 0002 0003 0004 0005 0006	TIME T&STA T&S&M T&RT T&YMD T&MDY T&DMY	This is used to select what is to appear as the time code or other superimposed display at the VIDEO OUT 3 connector. 0: Time only 1: Time and operating status 2: Time, operating status and mode 3: Time and recording time 4: Time and recording date (year/month/day) 5: Time and recording date (month/day/year) 6: Time and recording date (day/month/year) **<Notes>** • "DVCPRO MODE," "DV MODE" or "DVCAM MODE" is displayed as the mode when a DVCPRO, DV or DVCAM format tape is used, respectively. • When setting 2 (T&S&M) is used, an error message will appear when a warning or error has occurred. • The recording time and recording date are displayed only when a DV or DVCAM format tape is played back. The operating status is displayed when a DVCPRO format tape is played back.

The underline on the setting item denotes the initial setting.

USER menu

<BASIC> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
004	LOCAL ENA	0000 0001 0002	DIS ST&EJ ENA	This selects the buttons which can be operated on the front panel when the REMOTE/LOCAL switch has been set to REMOTE. 0: No buttons can be operated. 1: Only the STOP and EJECT buttons can be operated. 2: All buttons except for the RECORDER and PLAYER buttons can be operated.
005	TAPE TIMER	0000 0001	±12h 24h	This selects the 12 or 24 hour display for the CTL counter. 0: 12 hour display 1: 24 hour display
006	SUPER	0000 0001	OFF ON	This selects whether the time code and other super display which are output to the VIDEO OUT 3 connector is to shown. 0: Not shown. 1: Shown.
007	CHARA TYPE	0000 0001	WHITE W/OUT	This selects the display type for the super display output to the VIDEO OUT 3 connector as well as for displays such as the setting menu, etc. 0: White characters against a black background. 1: White characters with a black border.
008	REMAIN SEL	0000 0001	OFF ON	This selects whether the remaining tape time is shown on the front panel. 0: Not shown. 1: Shown. When “T&S&M” is selected as the setup menu item No. 003 (DISPLAY SEL) setting, the remaining tape time is displayed on the third line of the VIDEO OUT 3 connector superimposed display in place of the mode display. **<Note>** Even when “1” (ON) is selected, the remaining tape time is not shown while the unit is calculating the remaining tape time after ejecting or inserting the cassette.
009	SETUP NUMBER	0000 0001	OFF ON	This selects whether the SETUP-MENU No. is displayed on the front panel. 0: The SETUP-MENU No. is not displayed. 1: The SETUP-MENU No. is displayed.
010	MONI CONTROL	0000 0001	MANU AUTO	This sets whether the recorder is to be forcibly set to the EE mode and the player’s playback signals are to be output to the monitor by pressing the recorder’s PLAYER button when a monitor has been connected only to the recorder during deck-to-deck editing. 0: The recorder is not forcibly set to the EE mode. 1: The recorder is forcibly set to the EE mode, and the player’s playback signals are output.

The underline on the setting item denotes the initial setting.

USER menu

<OPERATION>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
100	SEARCH ENA	0000 0001	DIAL KEY	This selects the direct search dial operation. 0: For direct search dial operations. 1: Operation is not transferred to the search mode unless the search button is pressed.
101	SHTL MAX	0000 0001 0002	×16 ×32 ×60	This sets the maximum speed for shuttle operations. 0: 16× normal speed 1: 32× normal speed 2: 60× normal speed **<Note>** During DV or DVCAM format, the maximum speed is 32× normal speed even when 60× is selected.
102	FF. REW MAX	0000 0001 0002	×32 ×60 ×100	This sets the maximum speed for FF and REW operations. 0: 32× normal speed 1: 60× normal speed 2: 100× normal speed **<Note>** During DV or DVCAM format, the maximum speed is 32× normal speed regardless of this setting.
103	AUDIO MUTE	0000 0001	OFF ON	This sets the status until the audio signal is output when operation switches from the stop or search modes to the play mode. 0: The time until the audio is output is shortened. 1: The audio is output after the status stabilizes. **<Note>** When set to 0 (OFF), the sound in the initially output part is incomplete. Therefore, this setting is not recommended for broadcasts.
104	REF ALARM	0000 0001	OFF ON	This selects whether to warn the operator when the REF.VIDEO signal has not been connected. 0: Warning is not given. 1: Warning is given by the flashing STOP lamp.
105	AUTO EE SEL	0000 0001 0002	S/F/R STOP BLACK	This selects the VTR mode in which the EE status is established when the TAPE/EE switch is set to EE. 0: EE status is established in the STOP, FF or REW mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 1: EE status is established only in the stop mode. However, EE status is always established in EJECT mode regardless of the TAPE/EE switch setting. 2: EE status is established only in the stop mode. However, depending on TAPE/EE switch setting EJECT mode is as follows: TAPE/EE switch EE: EE status TAPE/EE switch TAPE: BLACK status for video MUTE status for audio
106	PLAY DELAY	0000 ⋮ 0015	0 ⋮ 15	This set the play delay time in frame increments.

The underline on the setting item denotes the initial setting.

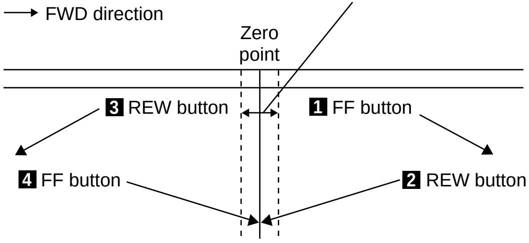
USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
108	FORMAT SEL	0000 0001 0002	DVCPRO DV DVCAM	These settings are for selecting the format when an L cassette or S cassette is used. 0: L cassette → DVCPRO mode S cassette → DV mode 1: L cassette/S cassette → DV mode 2: L cassette/S cassette → DVCAM mode **<Notes>** Bear in mind that, in addition to problems with playback, the trouble described below may occur when a tape which does not match the selected format is inserted. 1. If a DV or DVCAM tape is inserted when the DVCPRO mode setting has been selected, the recording operation will be conducted but no guarantee is given for the resulting performance, etc. Conversely, recording is not possible if a DVCPRO cassette tape is inserted when the DV or DVCAM mode setting has been selected. 2. The REMAIN display fails to appear properly. 3. The slow-down position near the tape start or end is not located accurately. 4. When a tape which does not match the selected format is inserted, no guarantee is given for the resulting performance, etc.
112	AUTO REW	0000 0001	OFF ON	This selects whether to rewind the tape automatically to the tape start when the tape end is detected. 0: The tape stops at the tape end. 1: The tape is rewound to the tape start.
113	MEMORY STOP	0000 0001	OFF ON	This selects whether the VTR is to stop automatically when the counter value reaches “0” during a fast forwarding or rewinding operation in the CTL mode. 0: The VTR does not stop. 1: The VTR stops automatically. **<Notes>** 1. The stop mode concerned is either the stop or the still-picture (SHTL STILL) mode depending on the setup menu No. 313 (AFTER CUE-UP) setting. 2. When both the AUTO REW function and MEMORY function have been selected at the same time, the AUTO REW function takes precedence.

The underline on the setting item denotes the initial setting.

Memory stop function


The MEMORY STOP function does not work if it is activated within a range of 0 ±2 frames.

❶ When the FF button is pressed, the VTR performs the regular fast forward operation since the zero point is not located in the direction of operation.

❷ When the REW button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads “0.”

❸ When the REW button is pressed, the VTR performs the regular rewinding operation since the zero point is not located in the direction of operation.

❹ When the FF button is pressed, the PREROLL lamp lights (the SHTL lamp lights as well), the VTR proceeds with the preroll operation, and it automatically stops when it reaches the position where the counter reads “0.”

USER menu

<OPERATION> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
115	STOP RESPNS	0000 0001	NORMAL QUICK	This selects the response when the mode is changed to STOP/STILL while the tape is traveling. 0: Priority is given to the output picture. 1: Priority is given to the response. **<Notes>** • At the 1 (QUICK) setting, the picture may not be as clear in the STOP/STILL mode as it would be at the 0 (NORMAL) setting. • CTL may shift by ±2 frames.
116	EE MODE SEL	0000 0001	NORMAL THRU	This selects the output signals in the EE mode. 0: Signals which are delayed by an amount equivalent to the time taken for the internal digital signal processing are output. 1: The signals are output without internal digital signal processing. **<Notes>** • The NORMAL setting is forcibly selected for the internal operation when the editing mode is selected, when SDTI is set as the video input signal selection or when INT SG is selected for the video or audio signals. • Use the signals which are output in the EE mode for monitoring purposes.
117	FRZ MODE SEL	0000 0001 0002	DIS STBOFF SOF&EJ	This selects the output pictures from the playback pictures in the STANDBY OFF mode and EJECT mode. 0: The video output is muted. 1: The playback picture is frozen at the moment when the STANDBY OFF mode was established, and output. 2: The playback picture is frozen at the moment when the STANDBY OFF mode and EJECT mode were established, and output. **<Notes>** • The status in the freeze mode follows the setting for setup menu No. 608 (FREEZE SEL). • In the EJECT mode, freeze pictures are output only when 2 (BLACK) is used as the setup menu No. 105 (AUTO EE SEL) setting.

The underline on the setting item denotes the initial setting.

USER menu

<INTERFACE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
200	PARA RUN	0000 0001	DIS ENA	This selects whether two or more VTRs are to be operated in synchronization. 0: No operation in synchronization 1: Operation in synchronization **<Note>** When operating two or more VTRs in synchronization, set item 200 of all the VTRs to 0001.
201	9P SEL	0000 0001	OFF ON	This selects whether the 9P connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Do not function 1: Function
202	ID SEL	0000 0001	OTHER DVCPRO	This selects the ID information which is returned to the controller. 0: 20 25H 1: DVCPRO's, own ID is returned (F0 33H).
203	25P SEL	0000 0001	OFF ON	This selects whether the PARALLEL (25P) connector functions when the REMOTE/LOCAL switch has been set to REMOTE. 0: Does not function 1: Functions
204	RS232C SEL	0000 0001	OFF ON	These settings are for selecting whether the RS-232C connector is to function when the REMOTE/LOCAL switch is set to REMOTE. 0: Connector does not function. 1: Connector functions.
205	BAUD RATE	0000 0001 0002 0003 0004 0005	300 600 1200 2400 4800 9600	These settings are for selecting the RS-232C communication speed (baud rate).
206	DATA LENGTH	0000 0001	7 8	These settings are for selecting the RS-232C data length. (Unit: bit)
207	STOP BIT	0000 0001	1 2	These settings are for selecting the RS-232C stop bit length. (Unit: bit)
208	PARITY	0000 0001 0002	NON ODD EVEN	These settings are for selecting the none, odd or even for the RS-232C parity bit. 0: Parity bit is not used. 1: An odd number of bits is used for the parity system. 2: An even number of bits is used for the parity system.
209	RETURN ACK	0000 0001	OFF ON	These settings are for selecting whether the ACK code is to be returned when a command is received from RS-232C. 0: ACK code is not returned. 1: ACK code is returned.
210	25P STBY CMD	0000 0001	OFF/ON ON	This selects the method used to detect the STANDBY COMMAND signal input at the PARALLEL (25P) connector. 0: Each time active signals are detected, the STANDBY ON or STANDBY OFF mode is selected alternately. 1: When active signals are detected in the STANDBY OFF mode, the unit is transferred to the STANDBY ON mode. No effect is exerted on operation while the STANDBY ON mode is established.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
301	IN/OUT DEL	0000 0001	MANU AUTO	This selects the operation to be performed when an edit point has been set incorrectly (when the OUT point is before the IN point). 0: Editing is not executed unless the illegal edit point is cleared or set again properly. 1: The edit points already input are automatically cleared.
302	NEGA FLASH	0000 0001	OFF ON	This selects whether to show a negative display when the IN point is greater than the OUT point. 0: No negative display. 1: Negative display.
303	STD/ NON-STD	0000 0001 0002	AUTO STD N-STD	This selects STD or NON-STD in accordance with the composite input signal. 0: Standard/non-standard signals are automatically identified and processed. 1: Standard signals are processed. (Forced STD) 2: Non-standard signals are processed. (Forced NON-STD)
304	SERVO REF	0000 0001	AUTO EXT	This selects the video signal processing. 0: Servo is synchronized with the input signal during recording and editing, or with the REF signal during playback. 1: Servo is synchronized at all times with the REF signal.
305	EDIT RPLCE1	0000 0001 0002 0003	N-DEF CH1 CH2 CH1+2	This sets the channel assignments for the controller’s analog audio preset when editing the digital audio of the VTR using a controller which does not have a digital audio edit preset control function. This selects the channel concerned when the VTR CH1 edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.
306	EDIT RPLCE2	0000 0001 0002 0003	N-DEF CH1 CH2 CH1+2	This selects the channel concerned when the VTR CH2 edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.
307	EDIT RPLCEC	0000 0001 0002 0003	N-DEF CH1 CH2 CH1+2	This selects the channel concerned when the VTR CUE edit preset is set in compliance with the ON or OFF presetting for the analog audio signals designated by the editor or controller. 0: Not set. 1: Compliance with analog CH1 edit preset. 2: Compliance with analog CH2 edit preset. 3: Compliance with either analog CH1 or CH2 edit preset.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
308	CONFI EDIT	0000 0001	OFF ON	This selects whether to conduct simultaneous playback while editing is in progress. 0: No simultaneous playback 1: Simultaneous playback **<Note>** Simultaneous playback is valid when the TAPE/EE switch is set to TAPE.
309	AUD EDIT IN	0000 0001	CUT FADE	This selects the connection method for the digital audio edit IN point. 0: Cut processing 1: V Fade processing
310	AUD EDIT OUT	0000 0001	CUT FADE	This selects the connection method for the digital audio edit OUT point. 0: Cut processing 1: V Fade processing
311	AUTO ENTRY	0000 0001	DIS ENA	This selects whether the IN point is to be entered using the PREROLL button when it has not been entered. 0: IN point is not entered. 1: IN point is entered.
312	CF ADJ SEL	0000 0001	PLAYER RECORD	This selects the CF adjustment deck with deck-to-deck editing. 0: The player’s edit IN/OUT points are adjusted. (reference as the RECORDER side) 1: The recorder’s edit IN/OUT points are adjusted. (reference as the PLAYER side)
313	AFTER CUE-UP	0000 0001	STOP STILL	This selects the mode after cue-up operation is complete. 0: STOP mode 1: SHTL STILL mode
316	VAR STEP	0000 0001	FINE COARSE	This selects the VAR speed during remote control operations. 0: The tape is played at the fine step speed. 1: The tape is played at a speed at which noise-less playback is possible in the –0.43× to +1× (–0.5× to +1×) range. **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • At the 1 (COARSE) setting, the phase cannot be synchronized from the editing controller.
317	VAR FWD MAX	0000 0001 0002 0003 0004 0005 0006 0007 0008	+4.1 +1.85 +1 +0.75 +0.5 +0.3 +0.2 +0.1 +0.03	This sets the maximum VAR FWD speed. 0: +4.1× (+3.1×) speed 1: +1.85× (+1.85×) speed 2: +1× (+1×) speed 3: +0.75× (+0.5×) speed 4: +0.5× (+0.5×) speed 5: +0.3× (+0.3×) speed 6: +0.2× (+0.2×) speed 7: +0.1× (+0.1×) speed 8: +0.03× (+0.03×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • In the DV/DVCAM mode, the maximum speed is set to +1× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1), the phase cannot be synchronized from the editing controller.

The underline on the setting item denotes the initial setting.

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
318	VAR REV MAX	0000 0001 0002 0003 0004 0005 0006 0007	–4.1 –1.85 –1 –0.43 –0.3 –0.2 –0.1 –0.03	This sets the maximum VAR REV speed. 0: –4.1× (–3.1×) speed 1: –1.85× (–1.85×) speed 2: –1× (–1×) speed 3: –0.43× (–0.5×) speed 4: –0.3× (–0.3×) speed 5: –0.2× (–0.2×) speed 6: –0.1× (–0.1×) speed 7: –0.03× (–0.03×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • In the DV/DVCAM mode, the maximum speed is set to –0.5× when the dial on the front panel is operated.
319	JOG STEP	0000 0001	FINE COARSE	This selects the JOG speed during remote control operations. 0: The tape is played at the fine step speed. 1: The tape is played at a speed at which noise-less playback is possible in the –0.43× to +1× (–0.5× to +1×) range. **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • At the 1 (COARSE) setting, the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
320	JOG FWD MAX	0000 0001 0002	+4.1 +1.85 +1	This sets the maximum JOG FWD speed. 0: +4.1× (+3.1×) speed 1: +1.85× (+1.85×) speed 2: +1× (+1×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • The maximum speed is set to +1× when the dial on the front panel is operated. • At any speed setting other than 0 (+4.1), the phase cannot be synchronized from an editing controller which synchronizes the phase using the JOG command.
321	JOG REV MAX	0000 0001 0002 0003	–4.1 –1.85 –1 –0.43	This sets the maximum JOG REV speed. 0: –4.1× (–3.1×) speed 1: –1.85× (–1.85×) speed 2: –1× (–1×) speed 3: –0.43× (–0.5×) speed **<Notes>** • The tape will be played at the speed given in parentheses in the DV/DVCAM mode. • When the dial on the front panel is operated, the maximum speed is set to –1× in the DVCPRO mode and to –0.5× in the DV/DVCAM mode.

The underline on the setting item denotes the initial setting.

USER menu

<EDIT> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
322	AUD MEM MODE	0000 0001 0002 0003 0004	OFF AMU_X AMU_VO INT_X INT_VO	This selects whether the voice-over or audio cross channel editing which is to be performed using the AJ-YA752 audio memory unit or internal audio memory. 0: Neither voice-over nor audio cross channel editing is performed 1: Audio cross channel editing is performed using the AJ-YA752 audio memory unit. 2: Voice-over editing is performed using the AJ-YA752 audio memory unit. 3: Audio cross channel editing is performed using the internal audio memory. 4: Voice-over editing is performed using the internal audio memory. **<Notes>** • The RS-232C interface will not function with the 1 (AMU_X) or 2 (AMU_VO) setting. • Refer to the instruction manual of the AJ-YA752 audio memory unit for details on how to use each mode using this unit.
323	AUD MEM CH	0000 0001	CH1 CH2	This sets the channel for the voice-over or audio cross channel editing which is performed using the AJ-YA752 audio memory unit or internal audio memory. 0: The signals are recorded onto CH1. 1: The signals are recorded onto CH2. **<Note>** This setting has no effect when AMU_VO has been selected as the setup menu No. 322 (AUD MEM MODE) setting.
324	POSTROLL TM	0000 0001 0002 0003 0004 0005	0s 1s 2s 3s 4s 5s	This sets the postroll time. Any time from 0 to 5 seconds can be set in 1-second units.

The underline on the setting item denotes the initial setting.

USER menu

<TAPE PROTECT>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
400	STILL TIMER	0000 0001 0002 0003 0004 0005 0006 0007 0008	0.5s 5s 10s 20s 30s 40s 50s 1min 2min	This selects the time to be taken until the unit goes into the tape protection mode when it is left standing in the stop or search still (JOG/VAR/SHTL) mode. (Unit: s = second, min = minute) **<Note>** With the DV or DVCAM format, the maximum time which can be set is 10 s even when a setting above 10 s has been selected. The selection screen, however, will operate for up to 2 minutes.
401	SRC PROTECT	0000 0001	STEP HALF	This selects the operation during the tape protection mode when the unit is left standing in the still status during the search mode (JOG/VAR/SHTL). 0: STEP FWD. 1: HALF LOADING. **<Note>** When STEP FWD is selected, the unit automatically goes into the HALF LOADING mode when the total time for which the unit is left standing in the still status reaches 30 minutes (DVCPRO) or 1 minute (DV or DVCAM).
402	DRUM STDBY	0000 0001	OFF ON	This selects the drum operation in the STANDBY OFF mode. 0: The drum stops rotating. 1: The drum continues rotating.
403	STOP PROTECT	0000 0001	STEP HALF	This selects the operation in the tape protection mode when the unit has been left standing in the STOP mode. 0: STEP FWD 1: HALF LOADING **<Note>** When STEP FWD is selected, the unit is automatically transferred to the HALF LOADING mode when the total time during which it has been left standing in the STOP mode reaches 30 minutes (or 1 minute with a DV/DVCAM tape).

The underline on the setting item denotes the initial setting.

<Note>
In order to protect the tape and VTR helical heads, it is recommended that the Still Timer be set for automatic tape protection mode in 30 seconds or under.

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
500	VITC POS-1	0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010	10L 11L 12L 13L 14L 15L 16L 17L 18L 19L 20L	This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-2 in 501 cannot be selected.)

The underline on the setting item denotes the initial setting.

USER menu

<TIME CODE>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
501	VITC POS-2	0000 0001 0002 0003 0004 0005 0006 0007 0008 0009 0010	10L 11L 12L 13L 14L 15L 16L 17L 18L 19L 20L	This sets the position where the VITC signal is to be inserted. (The same line as for VITC POS-1 in 500 cannot be selected.)
502	VITC BLANK	0000 0001	BLANK THRU	This selects whether to output the VITC data to the positions selected by VITC POS-1 in 500 and VITC POS-2 in 501. 0: Data is not output. 1: Data is output.
503	TCG REGEN	0000 0001 0002	TC&UB TC UB	This selects the signal to be regenerated when the time code generator (TCG) in the REGEN mode. 0: Both the time code and user bit are regenerated. 1: Only the time code is regenerated. 2: Only the user bit is regenerated.
504	REGEN MODE	0000 0001 0002 0003	AS&IN ASSEM INSRT SW	This selects whether the time code is to be regenerated during automatic editing using the unit's control panel. 0: Time code is regenerated with assemble or insert editing. 1: Time code is regenerated with assemble editing. 2: Time code is regenerated with insert editing. 3: Setting complies with REGEN/PRESET switch setting.
505	EXT TC SEL	0000 0001	LTC VITC	This selects the time code to be used when an external time code is to be used. 0: The LTC of the TIME CODE IN connector is used. 1: The video signal VITC is used.
506	BINARY GP	0000 0001 0002 0003 0004 0005 0006 0007	000 001 010 011 100 101 110 111	This sets the usage status of the user bit of the time code generated by the TCG. 0: NOT SPECIFIED (character set not specified) 1: ISO CHARACTER (8 bits character set based on ISO646, ISO2022) 2: UNASSIGNED 1 (undefined) 3: UNASSIGNED 2 (undefined) 4: UNASSIGNED 3 (undefined) 5: PAGE/LINE 6: UNASSIGNED 4 (undefined) 7: UNASSIGNED 5 (undefined)
507	PHASE CORR	0000 0001	OFF ON	This selects whether to control the phase correction of the LTC generated by the TCG. 0: Phase correction control is not performed. 1: Phase correction control is performed.
508	TCG CF FLAG	0000 0001	OFF ON	This selects whether the CF flag of the TCG is to ON. 0: CF flag is OFF. 1: CF flag is ON.
509	DF MODE	0000 0001	DF NDF	This selects the DF/NDF mode for CTL and TCG. 0: Drop frame mode. 1: Non-drop frame mode. No. 509 is valid when the CONTROL is LOCAL or LOCAL ENA of item 004 to "ENA".

The underline on the setting item denotes the initial setting.

USER menu

<TIME CODE> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
511	TC OUT REF	0000 0001	V OUT TC_IN	This is used to switch the phase of the time code, which is output from the TIME CODE OUT connector, for the external LTC input when the TC INT/EXT switch is at the EXT position. (In EE mode only) 0: Time code is synchronized with output video signal. 1: Time code is synchronized with external time code input.
512	VITC OUT	0000 0001	SBC VAUX	This selects how the VITC which is to be superimposed onto the output video signal is to be output. 0: During recording: The input time code, which was selected by the setup menu No. 505 (EXT TC SEL) setting and TC INT/EXT switch, is output as the VITC. During playback: The time code recorded in the SBC area is output as the VITC. 1: During recording: The time code detected from the input video signal is output as the VITC. During playback: The time code recorded in the VAUX area is output as the VITC. **<Note>** The time code detected from the input video signal is automatically recorded in the VAUX area while pictures are being recorded.

The underline on the setting item denotes the initial setting.

<VIDEO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
600	PB/PR IN LV	0000 0001	MII B-CAM	This selects the component input signal level. 0: MII level. 1: ß cam level.
601	INT BB SIG	0000 0001	OFF BB	This selects whether to generate the internal black burst signal. 0: Signal is not generated. 1: Signal is generated.
602	INPUT C KILL	0000 0001	B/W AUTO	This selects color killer processing for the video input signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
603	OUT VSYNC	0000 0001	N-VF VF	This selects whether to float the vertical sync position of the video output in order to align the video output phase with the input in the EE/record/edit modes. 0: Signals are not floated. 1: Signals are floated.

The underline on the setting item denotes the initial setting.

SBC (sub code data) area:
This area is separate from the video and audio data area on the helical track. The time codes complying with SMPTE/EBU standards, recording dates and times, and other tape control information are stored here. As with the conventional LTC (linear time code), the time code can be read even during rewinding or fast forwarding. It can also be read out when the tape has stopped.

VAUX (video auxiliary data) area:
This area is to be found in the video data area on the helical track. The additional information relating to the video data is stored here.

USER menu

<VIDEO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
604	V-MUTE SEL	0000 0001	N-MUTE LOW RF	This selects whether the video output signals are to be muted when the blank portion of the tape is detected during playback. 0: No muting. (Freeze) 1: Muting. (Set to gray.)
605	CC (F1) BLANK	0000 0001	BLANK THRU	This selects ON or OFF for the closed capture signal in the first field. 0: Forced blanking performed. 1: Blanking not performed.
606	CC (F2) BLANK	0000 0001	BLANK THRU	This selects ON or OFF for the closed capture signal in the second field. 0: Forced blanking performed. 1: Blanking not performed.
608	FREEZE SEL	0000 0001	FIELD FRAME	This selects the freeze mode for still pictures. 0: Field freeze. 1: Frame freeze. **<Note>** When frame freeze has been selected, the frame slow status is established with the slow setting.
610	OUT C KILL	0000 0001	B/W COLOR	This selects chroma color killer processing for the video output signals. 0: The signals are forcibly processed as B/W signals. 1: The signals are automatically processed.
611	EDH	0000 0001	OFF ON	This selects whether to superimpose EDH onto the serial output signals. 0: EDH is not superimposed. 1: EDH is superimposed. **<Note>** This item is valid when the optional serial interface board has been installed.
613	VIN SETUP	0000 0001	THRU CUT	This selects whether the composite signal is to be recorded with setup or without setup. 0: When recording signals with no setup. 1: When recording signals with 7.5% setup. **<Note>** When recording composite signals, be sure to double-check whether the signals are to be recorded with or without setup.
614	VOUT SETUP	0000 0001	THRU ADD	This selects the composite output signal. 0: The signal is output without setup. 1: The signal is output with 7.5% setup. **<Note>** When setting this menu item, bear the setup menu No. 616 (CMPNT SETUP) setting in mind.
616	CMPNT SETUP	0000 0001	THRU CUT	When composite, component and serial (digital) signals are to be output: 0: They are output in their original form. 1: They are output without the 7.5% setup signal.
617	INTER- POLATE	0000 0001	OFF AUTO	Although vertical interpolation is performed automatically during slow-motion playback and the vertical motion of the playback picture is reduced, this menu item enables the interpolation operation to be forcibly turned off. 0: The interpolation operation is forcibly turned off. 1: The interpolation operation is automatically turned on during slow-motion playback.

The underline on the setting item denotes the initial setting.

<AUDIO>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
700	CH1 IN LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio input (CH1) reference level switching.
701	CH2 IN LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio input (CH2) reference level switching.
702	CUE IN LV	0000 0001 0002 0003	4dB 0dB -20 dB -60 dB	This selects the CUE input reference level switching.
703	CH1 OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio output (CH1) reference level switching.
704	CH2 OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio output (CH2) reference level switching.
705	CUE OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the CUE output reference level switching.
706	MONIL OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio monitor output (Lch) reference level switching.
707	MONIR OUT LV	0000 0001 0002	4dB 0dB -20 dB	This selects the audio monitor output (Rch) reference level switching.
708	MONI OUT	0000 0001	UNITY VAR	This selects the audio monitor output volume UNITY/ VARIABLE reference switching. 0: The volume is output at the preset value. 1: The volume is linked with the headphones volume control.
709	EMPHASIS	0000 0001	OFF ON	This sets the emphasis ON or OFF.
710	CH1 IN SEL	0000 0001	ANA DIGI	This selects the CH1 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analog input. 1: Digital input.
711	CH2 IN SEL	0000 0001	ANA DIGI	This selects the CH2 input when USER SET has been selected by pressing the unit's AUDIO input selector switch. 0: Analog input. 1: Digital input.
712	DIGI IN SEL	0000 0001 0002	AES SIF1_2 SIF3_4	This selects the CH1 and CH2 digital input when USER SET has been selected by the unit's AUDIO input selector switch. 0: AES. 1: Serial I/F 1 and 2. 2: Serial I/F 3 and 4. **<Note>** Selections 1 and 2 are selected when the serial option is mounted.

The underline on the setting item denotes the initial setting.

USER menu

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
713	MONI CH SEL	0000 0001 0002	MANU AUTO1 AUTO2	This selects the monitor output. 0: The output is as selected in MONITOR SELECT. 1: The output defaults to CUE except when speed factor is between –0.43× and 1×, inclusive, in which case output is PCM AUDIO. 2: The output defaults to CUE except in PLAY mode, in which case output is PCM AUDIO. **<Note>** These menu settings are valid when CH1 or CH2 has been selected by the MONITOR SELECT L/R switches on the front panel. (When CUE has been selected, the CUE signal will be output at all speeds regardless of the above menu setting.)
714	REC CH1	0000 0001 0002	CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH1 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
715	REC CH2	0000 0001 0002	CH1 CH2 CH1+2	This selects the input signal to be recorded on the audio CH2 track. 0: Audio input CH1 signal. 1: Audio input CH2 signal. 2: Mixed audio input CH1 and CH2 signal.
716	REC CUE	0000 0001 0002 0003	CUE CH1 CH2 CH1+2	This selects the input signal recorded in CUE. 0: CUE input 1: The signal selected in Setup Menu No. 714 is recorded. 2: The signal selected in Setup Menu No. 715 is recorded. 3: A mixed signal of the signals selected in Setup Menu No. 714 and Setup Menu No. 715 is recorded.
718	DV OUTPUT	0000 0001 0002	ST1 ST2 ST1+2	This selects the AUDIO CH1 and CH2 output signals during DV or DVCAM format playback. 0: The CH1 track signals are output to CH1 and the CH2 track signals to CH2. 1: The CH3 track signals are output to CH1 and the CH4 track signals to CH2. 2: The mixed CH1 and CH3 track signals are output to CH1 and the mixed CH2 and CH4 track signals to CH2. **<Note>** This item setting is valid only when the tape recorded on the four channels of the DV or DVCAM format is played back.
719	PB FADE	0000 0001 0002	AUTO CUT FADE	This selects the processing method for the audio edit points (IN point, OUT point) during playback. 0: According to the status during recording. 1: Forced CUT 2: Forced FADE
720	EMBEDDED AUD	0000 0001	OFF ON	This selects whether to superimpose the audio data onto the serial output. 0: Data is not superimposed. 1: Data is superimposed. **<Note>** This item is valid when the optional serial interface board has been installed.
722	INT SG	0000 0001	OFF ON	This selects whether to use the internal signals as the audio input signals. 0: The internal signals are not selected. 1: The internal signals are selected. **<Note>** The internal signals have a frequency of 1 kHz.

The underline on the setting item denotes the initial setting.

<AUDIO> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
723	DV PB ATT	0000 0001	OFF ON	This selects the audio output level for DV or DVCAM format playback. 0: The audio output level is not attenuated. 1: The audio output level is attenuated (reduced). **<Notes>** As indicated below, whether the setting takes effect or not depends on the size of the cassette tape used. 1. When an "L" size cassette is used The setting takes effect only when "DV" or "DVCAM" has been selected as the setting for setup menu No. 108 (FORMAT SEL). 2. When an "M" size cassette is used The setting does not take effect. 3. When an "S" size cassette used The setting takes effect.
724	MONI SEL INH	0000 0001	OFF ON	This selects whether to allow (enable) or prohibit (disable) the operation of the MONITOR SELECT and MONITOR SET buttons on the front panel. 0: The buttons can be operated. 1: Operation of the buttons is prohibited.
725	CUE SLOW	0000 0001	STEP LINEAR	This selects the tape travel status (CUE track playback status) during SLOW playback. 0: Priority is given to the output picture, and tape travel is set to the step feed status. 1: Priority is given to CUE track playback, and the tape travel is set to the linear status. **<Notes>** When "1" (LINEAR) has been set: • It may not be possible to achieve as clear a picture as in the STEP mode. • The CTL counter may not operate properly.
726	CUE OUT	0000 0001	NORMAL DIRECT	This selects the output signals from the CUE OUT connector. 0: The timing is aligned with the output picture. 1: The signals recorded on the tape are output with no delay. **<Note>** When "1" (DIRECT) has been set, the output picture and CUE output timing will differ.
727	MONI MIX L	0000 0001	OFF CH1+2	This enables mixed signals to be selected for the monitoring through the headphones. 0: The signals are not mixed. 1: The CH1 and CH2 signals are mixed and output to the left channel.
728	MONI MIX R	0000 0001	OFF CH1+2	This enables mixed signals to be selected for the monitoring through the headphones. 0: The signals are not mixed. 1: The CH1 and CH2 signals are mixed and output to the right channel.
729	REC PT MUTE	0000 0001	OFF ON	This selects whether to mute the sound at the joins in the recording during playback in the DV or DVCAM format. 0: The sound is not muted. 1: The sound is muted.
730	CUE OUT SEL	0000 0001	OFF ON	This selects whether the cue signal is to be output to the main line system output in the search mode. 0: The cue signal is not output. 1: The cue signal is output. (This applies only when a setting other than MANU has been selected for setup menu item No. 713 (MONI CH SEL).)

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
800	ADD LINE	0000	OFF	This selects the mode in which the input signals are recorded on additional lines. 0: No additional line recording. 1: For 1-line recording of the input signals in the 422 mode. 2: For 1-line recording of the input signals in the 411 mode. 3: For the 1-line recording of input signals in their original form as the luminance signal. 4: For the 1-line recording of only the luminance signal after the input signals have been separated into the luminance and chrominance signals. 5: For the 1-line recording of only the chrominance signal after the input signals have been separated into the luminance and chrominance signals. 6: For the 2-line recording of input signals in their original form as the luminance signal. 7: For the 2-line recording of only the luminance signal after the input signals have been separated into the luminance and chrominance signals. 8: For the 2-line recording of only the chrominance signal after the input signals have been separated into the luminance and chrominance signals. **<Notes>** • When a setting from 1 to 8 is selected and the STOP button is pressed, operation moves to the sub screen and the recording line or lines can be selected. Press the STOP button again to return from the sub screen. • Depending on the additional line recording mode, the number of lines for recording teletext will differ.
		0001	YC422	
		0002	YC411	
		0003	Y1_B/W	
		0004	Y1_BPF	
		0005	C1	
		0006	Y2_B/W	
		0007	Y2_BPF	
		0008	C2	
Sub screen				
00	REC LINE	0000	10L	For selecting the additional line where the signals are to be recorded.
		⋮	⋮	
		0012	22L	
		0013	263L	
		0014	273L	
		⋮	⋮	
		0025	284L	
		0026	525L	
01	REC LINE2	0000	10L	For selecting the additional line where the signals are to be recorded. **<Note>** This menu item is not displayed when a setting from 1 to 5 has been selected as the additional line mode.
		⋮	⋮	
		0012	22L	
		0013	263L	
		0014	273L	
		⋮	⋮	
		0016	275L	
		⋮	⋮	
		0025	284L	
		0026	525L	

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
802	TELETEXT SEL	0000 0001	MOJI NABTS	For selecting the type of teletext signals to be recorded. 0: MOJI system 1: NABTS system
803	TELETEXT DET	0000 0001 0002	OFF AUTO MANU	This selects the method used to detect the lines in which the teletext signals are to be recorded. 0: The teletext signals are not recorded. 1: The teletext signals are automatically detected and recorded. 2: The lines in which the teletext signals are to be recorded are selected and set. **<Notes>** • When setting "1 (AUTO)" is selected, it may not be possible to record the teletext signals in all the lines depending on the setting of setup menu item No. 800 (ADD LINE). • When setting "2 (MANU)" is selected and the STOP button is pressed, operation transfers to the sub-screen, and the number of recording lines can be selected. To return from the sub-screen, press the STOP button again. • The number of lines in which the teletext signals can be recorded depends on the setting of setup menu item No. 800 (ADD LINE).
Sub screen				
00	REC LINE1	0000	OFF	This selects the lines in which the teletext signals are to be recorded. Factory mode settings REC LINE1: OFF REC LINE2: OFF REC LINE3: OFF REC LINE4: OFF REC LINE5: OFF REC LINE6: OFF REC LINE7: OFF REC LINE8: OFF REC LINE9: OFF REC LINE10: OFF REC LINE11: OFF REC LINE12: OFF REC LINE13: OFF
:	:	0001	10&273	
:	:	0002	11&274	
:	:	0003	12&275	
:	:	0004	13&276	
:	:	0005	14&277	
:	:	0006	15&278	
:	:	0007	16&279	
:	:	0008	17&280	
:	:	0009	18&281	
:	:	0010	19&282	
:	:	0011	20&283	
:	:	0012	21&284	
12	REC LINE13	0013	22	
804	BLANK LINE	0000 0001 0002	BLANK THRU MANU	This selects blanking ON or OFF for the vertical blanking period of the video signals. 0: Blanking is effected forcibly for all lines. 1: No blanking is effected for any of the lines. 2: Blanking ON or OFF is selected for each line. **<Note>** When setting "2 (MANU)" is selected and the STOP button is pressed, operation transfers to the sub-screen, and ON or OFF can be selected for each line. To return from the sub-screen, press the STOP button again.

The underline on the setting item denotes the initial setting.

USER menu

<V BLANK> (continued)

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
Sub screen				
00	LINE 10&273	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
01	LINE 11&274	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
02	LINE 12&275	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
03	LINE 13&276	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
04	LINE 14&277	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
05	LINE 15&278	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
06	LINE 16&279	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
07	LINE 17&280	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
08	LINE 18&281	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
09	LINE 19&282	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
10	LINE 20&283	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.
11	LINE 21&284	0000 0001	BLANK THRU	0: Blanking is forcibly effected. 1: No blanking is effected.

The underline on the setting item denotes the initial setting.

USER menu

<MENU>

Item		Setting		Description
No.	Superimposed display	No.	Superimposed display	
A00	LOAD	0000 0001 0002 0003	USER2 USER3 USER4 USER5	This selects the user file whose contents will be loaded into USER1. 0: The USER2 file contents are loaded. 1: The USER3 file contents are loaded. 2: The USER4 file contents are loaded. 3: The USER5 file contents are loaded. **<Note>** When the SET button is pressed after loading, the setting will be stored in the memory. When the MENU button is pressed, the setting will not be changed.
A01	SAVE	0000 0001 0002 0003 0004	USER2 USER3 USER4 USER5 LOCKED	This selects the user file into which the USER1 settings will be saved. 0: The settings are saved in USER2. 1: The settings are saved in USER3. 2: The settings are saved in USER4. 3: The settings are saved in USER5. 4: This display appears when all the user files are in the change prohibit status. **<Notes>** • User files whose status have been set to change prohibit cannot be selected. • When all the user files are in the change prohibit status, the “LOCKED” display appears and the contents cannot be saved.
A02	P.ON LOAD	0000 0001 0002 0003 0004	OFF USER2 USER3 USER4 USER5	This loads the contents of the selected user file into USER1 and it starts operation with the USER1 settings when the power is turned on. 0: Operation is started with the settings of the previously set user file. 1: The contents of USER2 are loaded into USER1 and operation is started with the USER1 settings. 2: The contents of USER3 are loaded into USER1 and operation is started with the USER1 settings. 3: The contents of USER4 are loaded into USER1 and operation is started with the USER1 settings. 4: The contents of USER5 are loaded into USER1 and operation is started with the USER1 settings.
A03	MENU LOCK	0000 0001	OFF ON	This selects whether to set or release the user file (USER2 – USER5) lock mode. 0: The lock is released (changes can be made). 1: The lock is set (changes are prohibited). **<Note>** The lock cannot be set for USER1.

The underline on the setting item denotes the initial setting.

<Notes>

- No. A00 (LOAD), No. A01 (SAVE) and No. A02 (P.ON LOAD) are the menu items which can be set only for USER1. They are not displayed with the USER2 – USER5 files.
- No. A03 (MENU LOCK) is the menu item which can be set only for the USER2 – USER5 files. It is not displayed with USER1.

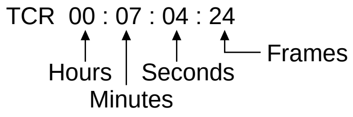
Time code/user bit

Time code

The time code is used when the time code signal generated by the time code generator (time code signal generator) is to be recorded on the tape, its values are to be read by the time code reader (time code signal reader), and the absolute position of the tape is to be displayed in increments of hours, minutes, seconds and frames.

The time code is written in the sub-code area (data area) of the helical track. This enables insert editing to be conducted independently using the time code alone. In addition, the VTR's playback speed can be read from the stop mode to slow-motion playback up to high-speed play (approx. 100X normal speed).

The time code values are indicated using the display and superimpose functions.



User bit

"User bit" refers to the 32-bit (8-digit) data frame among the time code signals which has been released to users. It enables operator numbers values to be recorded.
The alphanumeric characters which can be used for the user bit are the figures 0 to 9 and the letters A to F.

<Note>
Time code and user's bit control during tape play is exercised by the data recorded in the SBC area. The data recorded in this area includes the data that appears on the display or is superimposed on the TV monitor screen and the communication data that is transferred to the editing controller.

Recording internal/external time codes

1. Setting the internal time code

1 Place the VTR in the stop mode.

2 Set the TC/CTL switch to TC.

3 Set the TC INT/EXT switch to INT. (Internal time code selected)

4 Set the REC RUN/FREE RUN switch position.

REC RUN: The time code runs at the same time as the recording proceeds.
FREE RUN: The time code runs in the same way as the time regardless of the VTR's operation.

5 Set the REGEN/PRESET switch position.

REGEN: Continuity is maintained with the recorded time code before editing.
(Detailed settings are also possible using the menu settings. See the menu items below.)
Setup menu No. 503 (TCG REGEN)
Setup menu No. 504 (REGEN MODE)
PRESET: Recording starts from the value set with the TC SET button.

<Note>
During auto editing, REGEN will be selected by the setup menu No. 504 setting even if the switch has been set to the PRESET position.

6 Set the TC SET button.
Use the TC SET button to set the start number of the time code or user bit.

1. Press the SHIFT button.
   The leftmost digit flashes.

2. Press the ADJ button to change the value.
   Each time the button is pressed, the number changes. The setting range is given below.
   - **Time code**
     00:00:00:00 – 23:59:59:29
   - **User bit**
     00 00 00 00 – FF FF FF FF

3. Repeat steps 1 and 2 to change the value.

4. When the setting of the start number is completed, press the START button. In the FREE RUN mode, the time code now starts running.

5. Proceed with the recording or editing.

2. Setting the external time code (TC switch → EXT)

1 Place the VTR in the stop mode.

2 Set the TC/CTL switch to TC.

3 Set the TC INT/EXT switch to EXT. (External time code selected)

4 Setup menu No. 505 (EXT TC SEL) can be set as follows.

LTC: The LTC signal input to the TIME CODE IN connector (XLR) on the rear jack panel is recorded as the time code.
<Note> The LTC signal must be synchronized with the video signal.
VITC: The input video signal's VITC is recorded as the time code.

Reproducing the time code/user bit

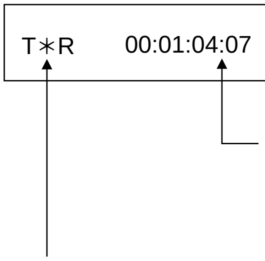
1 Place the unit in the stop mode.

2 Set the TC/CTL button to TC.

3 Set the TC/UB switch to TC or UB.
TC: The time code is displayed.
UB: The user bit is displayed.
- When it is no longer possible to read the time code, it is interpolated using the CTL signal.

4 Press the PLAY button.
Playback now commences, and the time code appears on the display.
When setup menu No. 006 (SUPER) is ON, the time code value is superimposed onto the video signal from the VIDEO OUT 3 connector.

<Notes>
- When the time code signal cannot be read, the time code is automatically interpolated by the CTL signal.
  The display appears as shown below.
- The colon between the seconds and frames changes to a period when the drop frame time code is read.

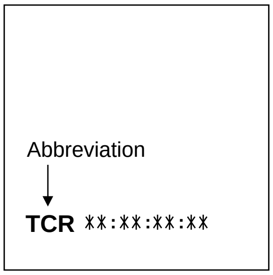


The colon between the seconds and frames changes to period during drop frame mode.

When the time code signal cannot be read, an asterix (∗) is displayed.

Superimpose screen

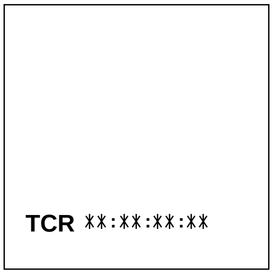
The control signals, time code, etc. are displayed using abbreviations.



TV monitor

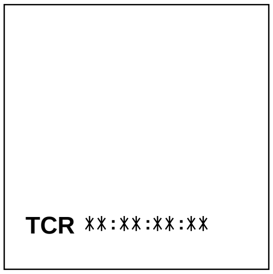
CTL = control signal
TCR = TC time code reading
UBR = TC user bit reading

Characters displayed
The background of characters superimposed on the display can be changed using setup menu No. 007 (CHARA TYPE).

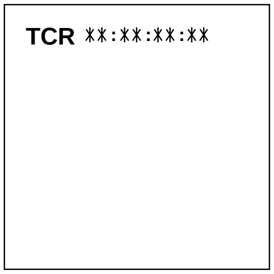


TV monitor

Display position
The position of the characters superimposed on the display can be changed using setup menus No. 001 (CHARA H-POS) and No. 002 (CHARA V-POS).

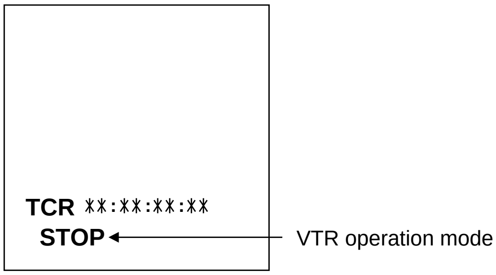


TV monitor



TV monitor

Operation mode
The VTR's operation mode can also be displayed using setup menu No. 003 (DISPLAY SEL).

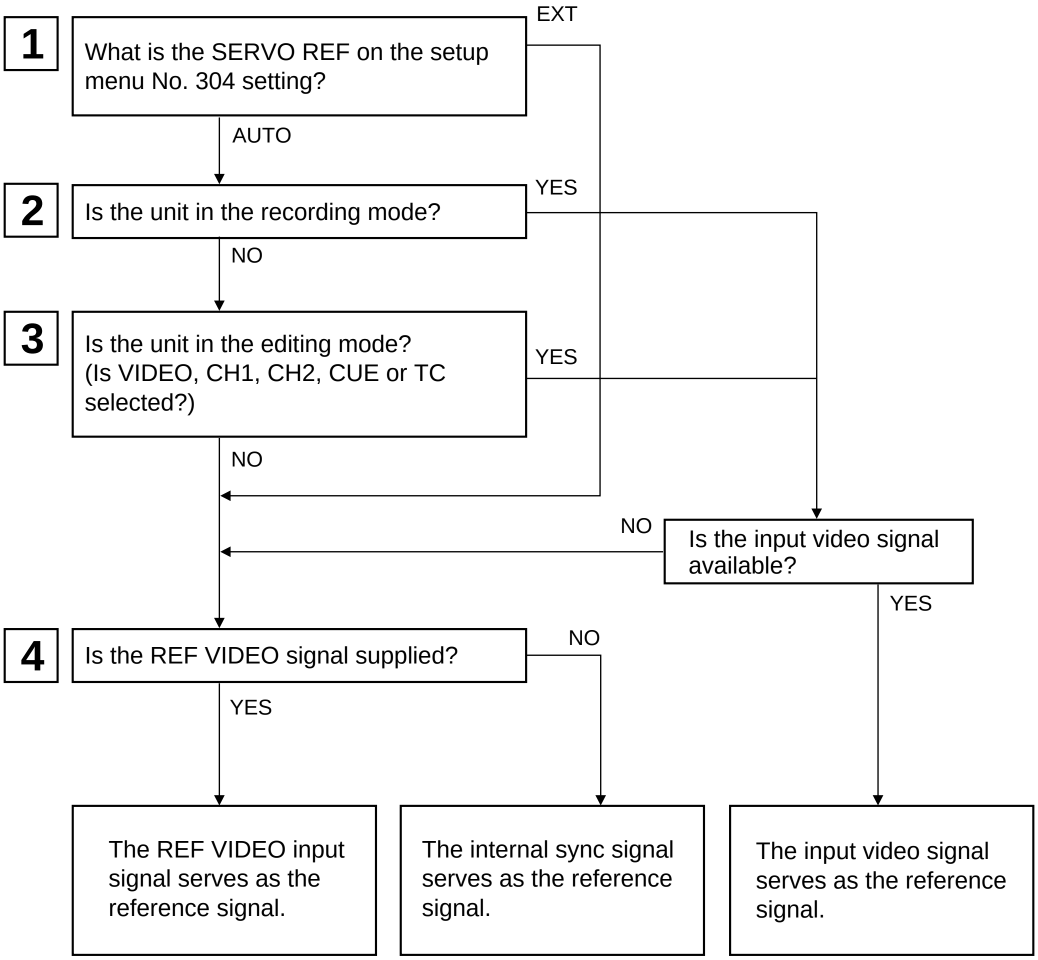


TV monitor

Servo reference

This unit automatically selects the input video signal selected by the INPUT switch, the reference video signal supplied from the REF VIDEO input connector or the internal sync signal as the servo reference signal.

When the signal is selected, the unit's mode and servo reference stand in the relationship shown in the flowchart presented below.


1
What is the SERVO REF on the setup menu No. 304 setting?
EXT
AUTO
2
Is the unit in the recording mode?
YES
NO
3
Is the unit in the editing mode? (Is VIDEO, CH1, CH2, CUE or TC selected?)
YES
NO
NO
Is the input video signal available?
YES
4
Is the REF VIDEO signal supplied?
NO
YES
The REF VIDEO input signal serves as the reference signal.
The internal sync signal serves as the reference signal.
The input video signal serves as the reference signal.

Servo reference setting tables

The servo reference signal is switched as shown in the tables below depending on the servo reference setting, deck mode and what input signal is available. When the mode is transferred to editing or recording/playback, the image may be disturbed and the transfer may be delayed if the references during playback and recording do not match.

■ During playback or special playback

SERVO REF on the setup menu No. 304 position	Input signal status		Reference signal (servo reference)
	VIDEO IN signal	REF IN signal	
AUTO	○	○	REF IN signal
	○	×	Internal sync signal
	×	○	REF IN signal
	×	×	Internal sync signal
EXT	○	○	REF IN signal
	○	×	Internal sync signal
	×	○	REF IN signal
	×	×	Internal sync signal

■ During recording or editing

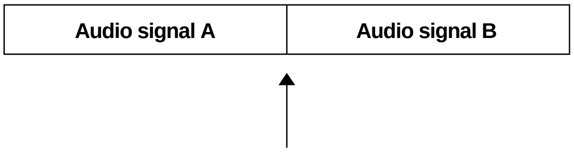
SERVO REF on the setup menu No. 304 position	Input signal status		Reference signal (servo reference)
	VIDEO IN signal	REF IN signal	
AUTO	○	○	VIDEO IN signal
	○	×	VIDEO IN signal
	×	○	REF IN signal
	×	×	Internal sync signal
EXT	○	○	REF IN signal
	○	×	Internal sync signal
	×	○	REF IN signal
	×	×	Internal sync signal

“○” denotes that the signal is supplied: “×” denotes that the signal is not supplied.

Audio V Fade Function

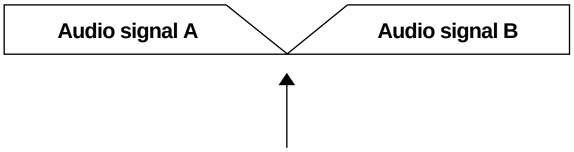
When editing tapes, the edit point splicing selection (setup menu No. 309 and 310) information is recorded on the tape. This information is then sensed during playback, and V fade or cut processing is automatically performed for these sections. [However, only when the playback fade selection (No. 719) is AUTO.]

When the edit point splicing selection (setup menu No. 309 and 310) is CUT



Noise appears at the edit splice.

When the edit point splicing selection (setup menu No. 309 and 310) is FADE

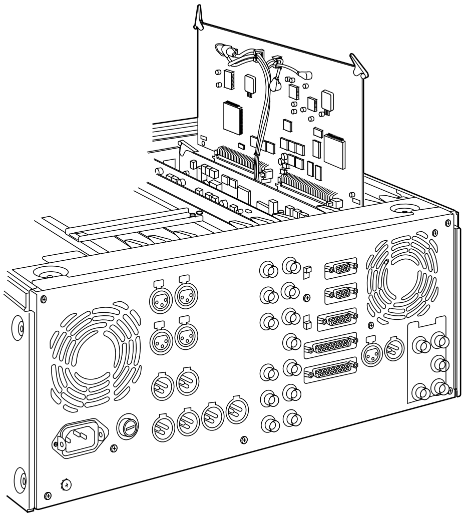


V fade is performed instantaneously to eliminate the noise.

<Notes>

- When the playback fade selection (No. 719) is CUT, cut processing is performed for all splices.
- When the playback fade selection (No. 719) is FADE, V fade processing is performed for all splices.

Printed circuit board



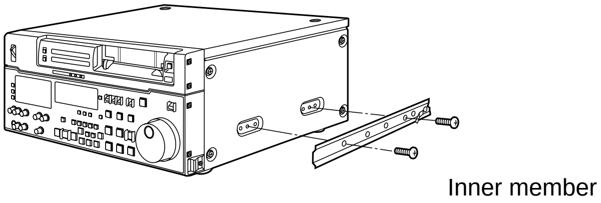
Printed circuit board	Abbr. name	Full name	Function	Factory setting
F8 board ADDA1	SW1	Audio Input Impedance SW	This sets the CH1 audio input impedance. HIGH/600Ω	HIGH
	SW41	Audio Input Impedance SW	This sets the CH2 audio input impedance. HIGH/600Ω	HIGH
H2 board CUE	SW101	Cue Input Impedance SW	This sets the CUE input impedance.	HIGH
F4 board	SW940	Component P_B/P_R Output level selector	This sets the component P_B/P_R output level when connecting with the editor. MII : MII level BETA : ß-CAM level	BETA

Rack mounting

The unit can be mounted into a 19-inch standard rack if the optional rack-mounting adaptors (AJ-MA75P) are used. For the installation rails, it is recommended that the rail and bracket for 18" length (model number CC3001-99-0400) of CHASSIS TRAK be used. (The complete slide rail and bracket unit is not available from Panasonic) For further details, consult with your dealer.

1 Remove the screws on the left and right sides of the unit.

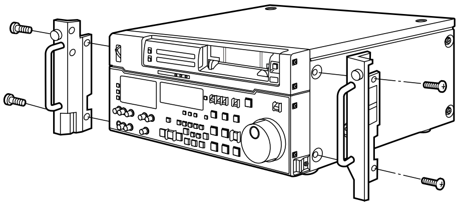
2 Use the removed screw to attach the inner members of the slide rails.



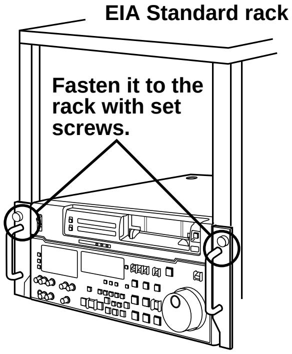
The length of the screws used is subject to restriction. If some of the mounting screws have been lost or misplaced, use screws which are less than 0.4" long in their place. Use four screws to secure each inner member.

3 Attach the outer member brackets to the rack.
Check that the height is the same for the left and right brackets.

4 Attach the AJ-MA75P rack-mounting adaptors with included 4 screws.



5 Remove the 4 rubber legs from the bottom of the unit, and install the unit in the rack.
After the unit has been installed, check that it moves smoothly along the rails.



<Notes>

- Keep the temperature inside the rack to between +41°F (5°C) and +104°F (40°C).
- Bolt the rack securely to the floor so that it will not topple over when the VTR is drawn out.

Video head cleaning

This unit has an auto head cleaning function which automatically reduces the dirt on the heads. However, to further increase the unit's reliability, it is recommended that its video heads be cleaned every day.
Use the cleaning fluid designated by Panasonic.

Condensation

Condensation occurs due to the same principle involved when droplets of water form on a window pane of a heated room. It occurs when the unit or tape is moved between places where the temperature or humidity varies greatly or when, for instance:

- It is moved to a very humid place full of steam or a room immediately after it has been heated up.
- It is suddenly moved from a cold location to a hot or humid location.

When moving the unit to locations such as these, leave it standing for about 10 minutes rather than switching on the power immediately.
If condensation has formed on or in the unit, the AUTO OFF lamp lights and the cassette tape is automatically ejected.
Keep the power supplied and simply wait until the AUTO OFF lamp goes off.

Error messages

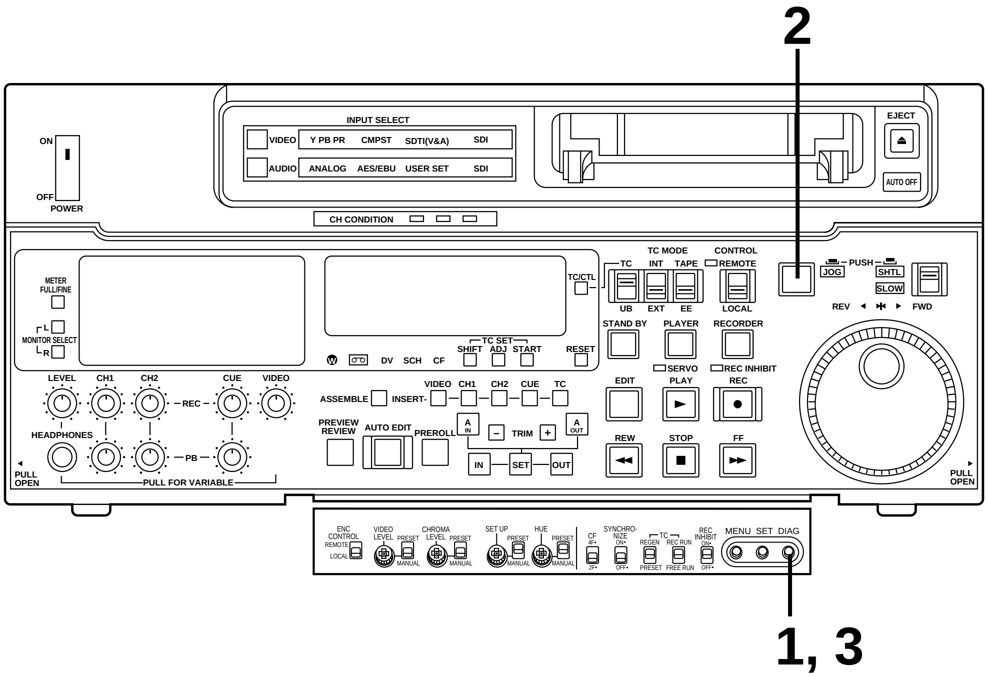
When a warning occurs in this unit, the warning lamp lights up.
Opening the DIAG menu will display the warning description on the counter display and the monitor. Also, when an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and a message appears on the counter display.

DIAG menu

This display the VCR information.
VCR information includes “WARNING” information and “HOURS METER” (usage time) information. A DIAG menu appears on the monitor when the monitor is connected to the VIDEO OUT 3 connector on the connector section.

Displaying the DIAG menu

1. Press the DIAG button.
   The DIAG menu screen is displayed on the monitor, and the message is displayed on the counter display.
2. The “WARNING” information and “HOURS METER” information can be switched by pressing the search buttons.
3. Press the DIAG button again to return to the original display.


2
1, 3
INPUT SELECT
VIDEO
Y PB PR
CMPST
SDTI(V&A)
SDI
AUDIO
ANALOG
AES/EBU
USER SET
SDI
EJECT
AUTO OFF
ON
OFF
POWER
CH CONDITION
METER FULL/FINE
MONITOR SELECT
TC/CTL
TC MODE
CONTROL
REMOTE
LOCAL
JOG
SHTL
SLOW
PUSH
REV
FWD
STAND BY
PLAYER
RECORDER
SERVO
REC INHIBIT
TC SET
SHIFT
ADJ
START
RESET
LEVEL
CH1
CH2
CUE
VIDEO
REC
PB
HEADPHONES
PULL FOR VARIABLE
PULL OPEN
ASSEMBLE
INSERT
PREVIEW REVIEW
AUTO EDIT
PREROLL
TRIM
IN
SET
OUT
EDIT
PLAY
REW
STOP
FF
MENU
SET
DIAG

“WARNING” information display

- A warning message is displayed whenever a warning occurs (the warning lamp lights up). When warnings have not been detected, “NO WARNING” is displayed.
- When multiple warning occur, the descriptions for each warning can be checked by turning the search dial.

Displaying the “HOURS METER” information

Turn the search dial to move the cursor (∗). The description for the item where the cursor is located is shown on the counter display.

Item No.	Item	Description
H00	OPERATION	Displays the time that the power has been supplied in one-hour units.
H01	DRUM RUN	Displays the time that the drum has been rotating in one-hour units.
H02	TAPE RUN	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units.
H03	THREADING	The number of times for threading/unthreading is displayed in single units.
H11	DRUM RUN r	Displays the time that the drum has been rotating in one-hour units. (Can be reset)
H12	TAPE RUN r	Displays the time that the tape has been running during FF, REW, PLAY, SEARCH (JOG, VAR, SHTL), REC, and EDIT modes (except for STILL in the JOG, VAR or SHTL mode) in one-hour units. (Can be reset)
H13	THREADING r	The number of times for threading/unthreading is displayed in single units. (Can be reset)
H30	POWER ON	This displays the number of times the power has been turned on in 1-time increments.

<Notes>

- The resettable items in the “HOURS METER” information are reset by the shop when performing maintenance or other work.
- The search buttons and the search dial cannot be operated while the DIAG menu is displayed.

If “T&S&M” is selected in the setup menu No. 003 (DISPLAY SEL), a message appears in the mode display whenever a warning or error occurs. When multiple events occur, the event with the highest priority is displayed.

Priority	Display	Description
High ▲	Error messages (See error message table)	When an abnormal operation is detected in this unit, the AUTO OFF lamp lights up and an error message is displayed.
	INT SG	If “BB” in No. 601 (INT BB SIG) in the setup menu is selected or when ON has been selected as the setup menu No. 722 (INT SG) setting, pressing the REC button or the EDIT button (E to E mode) will display “INT SG” for the first two seconds. This is also displayed for the first two seconds when starting editing.
	NO INPUT	If there is no input signal (except for analog audio) to the connector selected using the INPUT SELECT switch, pressing the REC button or the EDIT button (E to E mode) will display “NO INPUT” for the first two seconds. This is also displayed for the first two seconds when starting editing.
▼ Low	Warning messages (See error message table)	When a warning occurs in this unit, the warning lamp lights up and a warning message is displayed. When multiple warnings occur, the warning with the highest priority is displayed.

Warning messages

Priority	Monitor display	Description	VTR operation
High ▲	FAN STOP	This is displayed when the fan motor stops.	Operation continues
	SERVO NOT LOCKED	This is displayed when the servo is not locked for three or more seconds during playback, recording, or editing.	Operation continues
	LOW RF	This is displayed when envelope levels approximately 1/3 that of normal levels are detected for more than one second during playback, recording, or editing.	Operation continues
	HIGH ERROR RATE	This is displayed when the error rate increases and correction/interpolation is performed on either the video or audio playback signal.	Operation continues
▼ Low	OVER RECORDING	When voice-over editing is performed using the internal audio memory, this message appears if the duration of the signals recorded in the memory exceeds 20 seconds.	Operation continues

Table of AUTO OFF Error messages

Counter display	Monitor display	Description	VTR operation (Restart condition)
CAP ROTATE TOO SLOW	**CAP ROTA TOO SLOW**	If the capstan motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
CAP TENSION ERROR	**CAP TENSION ERROR**	If an abnormal tension at the supply side is detected in the capstan mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DEW	**DEW**	If condensation is detected, the AUTO OFF lamp lights, the message display flashes, and the VTR is transferred to the eject mode. After the tape is ejected, the drum rotates in order to eliminate the condensation. When the condensation has been eliminated, the AUTO OFF lamp and message display go off, and the VTR can be used. **<Notes>** 1) If condensation is detected in the eject mode, the drum starts rotating as soon as it is detected. 2) If condensation is detected when the cassette has been inserted, the drum rotation is stopped, and after the tape is ejected, the drum starts rotating.	EJECT (Normal operation resumed after condensation is eliminated)
DRUM ROTATE TOO FAST	**DRUM ROTA TOO FAST**	If the cylinder motor speed is abnormally high, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
DRUM ROTATE TOO SLOW	**DRUM ROTA TOO SLOW**	If the cylinder motor speed is abnormally low, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
E-FF	**E-FF**	If the tape start and tape end are detected simultaneously either during or after loading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
FRONT LOAD ERROR	**FRONT LOAD ERROR**	The AUTO OFF lamp lights and the message display flashes when the take-up reel has been rotating idly for a fixed period of time while the start/end processing operation during loading (half position) is being performed or when it was impossible to eject the tape.	STOP (POWER OFF→ON)
FRONT LOAD MOTOR	**FRONT LOAD MOTOR**	If the cassette does not move up even when 6 seconds have elapsed since the VTR was transferred to the eject mode, the AUTO OFF lamp lights, and the message display flashes. **<Note>** If the cassette does not move down inside the machine even when 6 seconds have elapsed since the cassette was inserted, the VTR is transferred to the eject mode.	STOP (POWER OFF→ON)
LOADING MOTOR	**LOADING MOTOR**	When the unloading operation is not completed within 6 seconds, the AUTO OFF lamp lights, and the message display flashes. **<Note>** When the loading operation is not completed within 6 seconds, the VTR is transferred to the eject (unloading) mode.	STOP (POWER OFF→ON)

Counter display	Monitor display	Description	VTR operation (Restart condition)
REEL DIR UNMATCH	**REEL DIR UNMATCH**	If the reel motor at the take-up side is running in the reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
REEL TENSION ERROR	**REEL TENSION ERROR**	If an abnormal tension at the supply side is detected in the reel mode, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO COMM ERROR	**SERVO COMM ERROR**	When the servo microcomputer does not follow the instructions of the system control microcomputer even when 10 seconds have elapsed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO CONTROL ERROR	**SERVO CONTROL ERR**	When there is no response from the servo microcomputer for 1 or more seconds, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
SERVO ERROR	**SERVO ERROR**	When only the servo microcomputer was reset in an instantaneous power failure, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S-FF/REW TIMEOVER	**S-FF/REW TIMEOVER**	If the start/end processing operation is not completed, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL ROTA TOO FAST	**S REEL TOO FAST**	If the supply reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
S REEL TORQUE ERROR	**S REEL TORQUE ERR**	If an abnormal torque applied to the supply reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL ROTA TOO FAST	**T REEL TOO FAST**	If the take-up reel motor should rotate at an abnormally fast rate, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
T REEL TORQUE ERROR	**T REEL TORQUE ERR**	If an abnormal torque applied to the take-up reel motor is detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
UNLOAD ERROR	**UNLOAD ERROR**	If the tape has not been wound up during unloading, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP ERROR	**WINDUP ERROR**	If the tape was not wound up at less than the standard speed (1×) when the total tape amount was not detected or if abnormal tape slack or tension was detected at speeds above 1× after the total tape amount was detected, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)
WINDUP REEL NOT ROTA	**W-UP REEL NOT ROTA**	If, after the cassette has been inserted, the tape take-up reel has not wound up the tape at the standard speed (1×) or faster while the total tape amount is not detected and while the tape is traveling in the forward or reverse direction, the AUTO OFF lamp lights, and the message display flashes.	STOP (POWER OFF→ON)

RS-232C interface

1. Introduction

(1) The VTR can be operated by commands when the RS-232C interface is used.

(See command table on pages 95 – 97.)

(2) Conditions for acknowledging commands from RS-232C interface

The front panel REMOTE/LOCAL switch must be at REMOTE.
The setup menu item No. 204 “RS232C SEL” must be ON.

If the above conditions are not met, [ACK] + [STX]ER001[EXT] is returned to the external unit.
Whether the [ACK] code is returned depends on the setting which has been selected for setup menu item No. 209 “RETURN ACK”.

2. Hardware specifications

External interface specifications

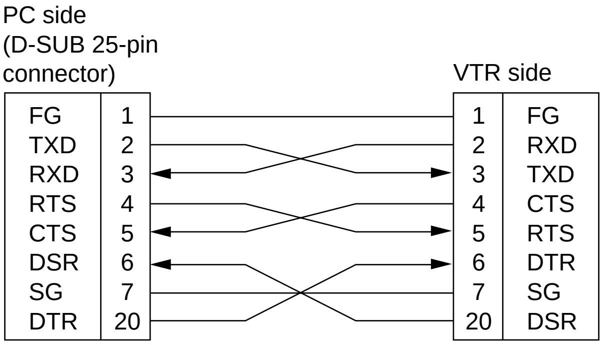
1) Connector specifications

Connector: D-SUB 25-pin (crossover cable supported)

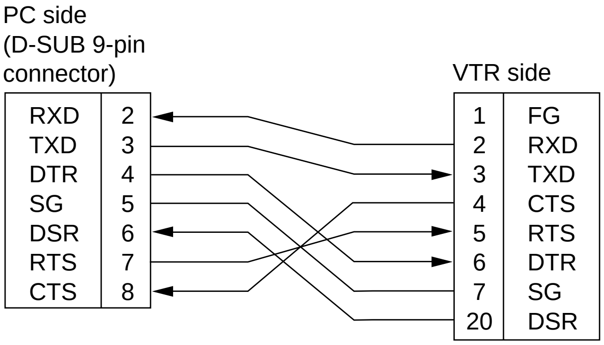
Pin No.	Signal	Circuit name	Description
1	FG	Protective ground	Frame ground
2	RXD	Received data	Data is sent to PC.
3	TXD	Transmitted data	Data is received from PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	SG	Signal ground	Signal ground
20	DSR	Data set ready	+ voltage output after communication enable status

2) Example of connection with controller (PC)

■ **Using crossover cable with D-SUB 25-pin connectors**


PC side
(D-SUB 25-pin
connector)
VTR side
FG 1
TXD 2
RXD 3
RTS 4
CTS 5
DSR 6
SG 7
DTR 20
1 FG
2 RXD
3 TXD
4 CTS
5 RTS
6 DTR
7 SG
20 DSR

■ **Using crossover cable with D-SUB 9-pin and 25-pin connectors**


PC side
(D-SUB 9-pin
connector)
VTR side
RXD 2
TXD 3
DTR 4
SG 5
DSR 6
RTS 7
CTS 8
1 FG
2 RXD
3 TXD
4 CTS
5 RTS
6 DTR
7 SG
20 DSR

3. Software specifications

Protocol

1) Communication parameters

Communication system	Asynchronous, full duplex
Communication speed	300/600/1200/2400/4800/9600
Bit length	7 bit/8 bit
Stop bit	1 bit/2 bit
Parity bit	NONE/ODD/EVEN
ACK code	ACK code returned/ACK code not returned **<Note>** The ACK code is what is returned from the VTR to the controller when data has been successfully sent from the controller.

The underlining indicates the factory settings.

Any changes to the settings can be made using the setup menu items listed below.

Communication parameter	Setup menu item
Communication speed	No. 205 BAUD RATE
Bit length	No. 206 DATA LENGTH
Stop bit	No. 207 STOP BIT
Parity bit	No. 208 PARITY
ACK code	No. 209 RETURN ACK

2) Send format [controller (PC) → VTR]

■ Data format

[STX] [command] [:] [data] [ETX]
02h XX XX XX 3Ah XX-XX 03h ←(ASCII code: symbols, numbers upper-case letters)

20h<XX<7Fh

- [command]: Command identifier; a 3-byte identifier (ASCII code: symbols, numbers, upper-case letters) is sent as the command.
- [:]: This code serves as a delimiter between the command and data.
- [data]: Data (ASCII code: symbols, numbers, upper-case letters) can be added in the number of bytes required.

■ Outline of send procedure from controller

1. The send command starts with STX (start of text = 02h). The command is then identified by COMMAND which follows and the data is added as required.
   The format ends with ETX (end of text = 03h).
2. When a different command is to be sent, a response is awaited from the VTR, and then the command is sent. (See page 94.)
3. If STX is sent again before ETX is sent, the receive data buffer inside the VTR is cleared. A command error is returned to the controller, and the data is newly processed with STX which was received again at the head.

3) Return format [VTR → controller (PC)]

The following responses are made to the command. If necessary, more than one response is made.

■ When the communication has terminated normally

1. The receive completion message is returned.
   [ACK]
   06h

2. The execution completion message is returned.
   [STX] [command] [data] [ETX]
   02h XX XX XX XX-XX 03h

- [command]: This is the message (data) which is returned or the execution completion message identifier.
- [data]: This is the data to be returned. It can be omitted.

Example: Send command → Return message (data)
[STX] OPL [ETX] → [ACK] [STX] OPL [ETX]

■ When the communication has terminated abnormally

[NACK]
15h

■ When processing is not possible due to incorrect data or trouble in the VTR

1. The receive completion message is returned.
   [ACK]
   06h

2. An error code is returned.
   [STX] E R N_1 N_2 N_3 [ETX]
   02h Error code 03h

4. Error code table

ER001: Invalid command
- Unsupported command received.
- Error in command execution

ER002: Parameter error
ER102: VTR mode error (front loading motor)
ER103: VTR mode error (loading motor)
ER104: VTR mode error (drum, capstan system)
ER105: VTR mode error (reel system)
ER106: VTR mode error (tension system)
ER108: VTR dew error
ER1FF: VTR system error

5. Command table

(1) Commands relating to operation control

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

<table>
<tr><th>VTR operation</th><th>Send command</th><th>Return (completion) message</th><th>Supplementary notes</th></tr>
<tr><td>STOP</td><td>[STX] OSP [ETX]</td><td>[STX] OSP [ETX]</td><td>This command is for stopping the tape travel.
The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL).</td></tr>
<tr><td>EJECT</td><td>[STX] OEJ [ETX]</td><td>[STX] OEJ [ETX]</td><td>This command is for ejecting the cassette tape.
The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL).</td></tr>
<tr><td>PLAY</td><td>[STX] OPL [ETX]</td><td>[STX] OPL [ETX]</td><td>This command is for starting playback.</td></tr>
<tr><td>REWIND</td><td>[STX] ORW [ETX]</td><td>[STX] ORW [ETX]</td><td>This command is for rewinding the tape.
The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL).
The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).</td></tr>
<tr><td>FAST FORWARD</td><td>[STX] OFF [ETX]</td><td>[STX] OFF [ETX]</td><td>This command is for fast forwarding the tape.
The resulting output picture and sound statuses differ according to the settings selected for the setup menu No. 105 (AUTO EE SEL).
The maximum tape speed differs according to the setting selected for setup menu No. 102 (FF. REW MAX).</td></tr>
<tr><td>REC</td><td>[STX] ORC [ETX]</td><td>[STX] ORC [ETX]</td><td>This command is for starting the recording.</td></tr>
<tr><td rowspan="2">SHTL FORWARD</td><td>[STX] OSF:data [ETX]</td><td>[STX] OSF [ETX]</td><td>This is the forward direction shuttle command.</td></tr>
<tr><td colspan="3">data = n: speed data
0: STILL
1: ×0.03 (DVCPRO), ×0.03 (DV, DVCAM)
2: ×0.1 (DVCPRO), ×0.1 (DV, DVCAM)
3: ×0.2 (DVCPRO), ×0.3 (DV, DVCAM)
4: ×0.5 (DVCPRO), ×0.5 (DV, DVCAM)
5: ×1 (DVCPRO), ×1 (DV, DVCAM)
6: ×1.85 (DVCPRO), ×1.85 (DV, DVCAM)
7: ×4.1 (DVCPRO), ×3.1 (DV, DVCAM)
8: ×9.5 (DVCPRO), ×9.5 (DV, DVCAM)
9: ×16 (DVCPRO), ×16 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX).
A: ×32 (DVCPRO), ×32 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX).</td></tr>
</table>

VTR operation	Send command	Return (completion) message	Supplementary notes
SHTL REVERSE	[STX] OSR:data [ETX]	[STX] OSR [ETX]	This is the reverse direction shuttle command.
	data = n: speed data 0: STILL 1: ×0.03 (DVCPRO), ×0.03 (DV, DVCAM) 2: ×0.1 (DVCPRO), ×0.1 (DV, DVCAM) 3: ×0.2 (DVCPRO), ×0.3 (DV, DVCAM) 4: ×0.43 (DVCPRO), ×0.5 (DV, DVCAM) 5: ×1 (DVCPRO), ×1 (DV, DVCAM) 6: ×1.85 (DVCPRO), ×1.85 (DV, DVCAM) 7: ×4.1 (DVCPRO), ×3.1 (DV, DVCAM) 8: ×9.5 (DVCPRO), ×9.5 (DV, DVCAM) 9: ×16 (DVCPRO), ×16 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX). A: ×32 (DVCPRO), ×32 (DV, DVCAM) : This speed differs according to the setting selected for setup menu No. 101 (SHTL MAX).		
STANDBY OFF	[STX] OBF [ETX]	[STX] OBF [ETX]	This command is setting the VTR to standby OFF.
STANDBY ON	[STX] OBN [ETX]	[STX] OBN [ETX]	This command is setting the VTR to standby ON.

(2) Commands relating to inquiries

<Notes>

- As for the return (completion) message, [ACK] is first returned when data is received, and the execution message is subsequently returned. It is only the execution message which is listed in this table.
- In the case of commands not listed in the table, ER001 (invalid command) is returned after [ACK] has been returned.

VTR operation	Send command	Return (completion) message	Supplementary notes
CTL/TC DATA REQUEST	[STX] QCD [ETX]	[STX] CD data [ETX]	This command is for inquiring about the counter value.
		data = f w gh mm ss ff f = F w = S gh = CTL: g = SP (20h): for a plus display – (2Dh): for a minus display h = 0 – 9: hours TC: gh = 00 – 23: hours mm = 00 – 59: minutes ss = 00 – 59: seconds ff = 00 – 29: frames	CTL or TC is returned, whichever corresponds to the front display mode.
STATUS REQUEST	[STX] QOP [ETX]	[STX] xxx [ETX]	This command is for inquiring about the VTR's operation mode.
		xxx = OEJ: EJECT OFF: FAST FORWARD OPL: PLAY ORC: REC ORW: REWIND OSP: STOP (including the STANDBY ON) SRS: (IN/OUT) PREROLL OBF: STANDBY OFF OSF: SHTL FORWARD OSR: SHTL REVERSE OJG: JOG FORWARD/REVERSE OSW: VAR FORWARD/REVERSE EAE: AUTO EDIT EON: EDIT ON (MANUAL EDIT) EPV: PREVIEW ERV: REVIEW	
ID (VTR No.) REQUEST	[STX] QID [ETX]	[STX] data [ETX]	This command is for inquiring about the VTR used.
		data = AJ-D850	

(3) Microsoft QuickBASIC sample program

```
CLS
STX$ = CHR$(&H2): ETX$ = CHR$ (&H3): NAK$ = CHR$(15): ACK$ = CHR$(&H6)
PRINT "*** RS-232C COMMUNICATION SAMPLE PROGRAM ***"
PRINT "Type Command 'QUIT' to quit."
PRINT

REM *** Communication Port Initial & Open ***
REM Port 1,9600Bps,No parity,8 bit data,1 stop bit
OPEN "COM1:9600,N,8,1" FOR RANDOM AS #1 LEN = 256

REM *** Input Command & Send Command ***
SendCmd:
INPUT "Input Command ="; SEND$
IF SEND$ = "QUIT" THEN GOTO ProgEnd
PRINT #1, STX$ + SEND$ + ETX$

REM *** Wait for Receive Command ***
WHILE LOC(1) = 0
        WAITKEY$ = INKEY$
        IF WAITKEY$ = "Q" THEN PRINT "*** Quit ***": GOTO ProgEnd
WEND

REM *** Receive Command ***
RecvCmd:
RECV$ = INPUT$(1, #1)
IF RECV$ = STX$ THEN RECV$ = "[Stx]"
IF RECV$ = ACK$ THEN RECV$ = "[Ack]"
IF RECV$ = NAK$ THEN RECV$ = "[Nak]"
IF RECV$ = ETX$ THEN BUFFER$ = BUFFER$ + "[Etx]": GOTO DispOut
BUFFER$ = BUFFER$ + RECV$
GOTO RecvCmd

REM *** Output Receive Command ***
DispOut:
PRINT "Receive Command ="; BUFFER$
PRINT
BUFFER$ = ""
GOTO SendCmd

REM *** End Program ***
ProgEnd:
CLOSE
END
```

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Connector signals

VIDEO IN

SERIAL IN (DIGITAL)	BNC × 2	Active through (Option)
Y, P_B, P_R (ANALOG)	BNC × 3	
VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided
REF VIDEO IN	BNC × 2	Loop-through, 75Ω termination switch provided

VIDEO OUT

SERIAL OUT (DIGITAL)	BNC × 3	(Option)
Y, P_B, P_R (ANALOG)	BNC × 3	
VIDEO OUT	BNC × 3	

AUDIO IN

SERIAL IN (DIGITAL)	BNC × 2	(Option)
AUDIO IN (DIGITAL)	XLR × 2	CH1/CH2, AES/EBU format
AUDIO IN (ANALOG)	XLR × 2	CH1, CH2
CUE IN	XLR × 1	
TIME CODE IN	XLR × 1	

Pin No.	Signal
1	GND
2	HOT
3	COLD

AUDIO OUT

SERIAL OUT (DIGITAL)	BNC × 3	(Option)
AUDIO OUT (DIGITAL)	XLR × 2	CH1/CH2, AES/EBU format
AUDIO OUT (ANALOG)	XLR × 2	CH1, CH2
CUE OUT	XLR × 1	
TIME CODE OUT	XLR × 1	
MONITOR OUT	XLR × 2	L (CH1)/R (CH2)
HEADPHONES (front)	Mini-jack	

RS-422A REMOTE (9P)

REMOTE IN/OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	RECEIVE COMMON	7	TRANSMIT B
2	TRANSMIT A	5	———	8	RECEIVE A
3	RECEIVE B	6	TRANSMIT COMMON	9	FRAME GROUND

REMOTE OUT

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	FRAME GROUND	4	TRANSMIT COMMON	7	RECEIVE B
2	RECEIVE A	5	———	8	TRANSMIT A
3	TRANSMIT B	6	RECEIVE COMMON	9	FRAME GROUND

Connector signals

PARALLEL REMOTE (25P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	PLAY COMMAND	10	———	19	STAND BY ON STATUS
2	STOP COMMAND	11	———	20	PREROLL STATUS
3	FF COMMAND	12	≥10V, MAX 300mA	21	SERVO LOCK STATUS
4	REW COMMAND	13	PLAY STATUS	22	OPERATION ENABLE STATUS
5	REC COMMAND	14	STOP STATUS	23	———
6	EJECT COMMAND	15	FF STATUS	24	———
7	STAND BY COMMAND	16	REW STATUS	25	GND
8	PREROLL COMMAND	17	REC STATUS		
9	IN SET COMMAND	18	EJECT STATUS		

<Notes>

- COMMAND pins: TTL level, active low, ≥100ms edge electrical signal.
- STATUS pins: open collector, sink current 6 mA

RS-232C REMOTE (25-pin D-SUB crossover cable supported)

Pin No.	Abbreviation	Circuit	Description
1	FRAME GROUND	Protective ground	Frame ground
2	RxD	Received data	Sends data to the PC.
3	TxD	Transmitted data	Receives data from the PC.
4	CTS	Clear to send	Shorted with pin 5.
5	RTS	Request to send	Shorted with pin 4.
6	DTR	Data terminal ready	No processing
7	GND	Signal ground	Signal ground
20	DSR	Data set ready	Positive power output after communication enable status

ENCODER REMOTE (15P)

Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	———	6	SYSTEM H 0	11	RET GND
2	SET UP	7	SYS.SC COARSE (2)	12	———
3	C LEVEL	8	–12V	13	———
4	GND	9	HUE	14	SYS.SC FINE
5	+12V	10	VIDEO LEVEL	15	SYS.SC COARSE (1)

Specifications

GENERAL

Power supply:	AC 120 V, 50 – 60 Hz
Power consumption:	210 W

Operating ambient temperature:	41°F to 104°F (5°C to 40°C)
Operating ambient humidity:	10% to 90% (no condensation)
Weight:	36.96 lbs (16.8 kg)
Dimensions (W × H × D):	16-3/4 × 6-15/16 × 16-3/8 inches
Recording format:	DVCPRO format
Recording tracks:	Digital video Time code; Recorded in sub-code area Digital audio; 2 channels Cue Signal; 1 track Control (CTL); 1 track
Tape speed:	33.820 mm/sec
Recording time:	184 minutes (with AJ-5P92LP) 66 minutes (with AJ-P66MP)
Tape:	1/4-inch thin magnetic layer metal tape
FF/REW time:	Less than 3 minutes (with AJ-5P92LP) Less than 2 minutes (with AJ-P66MP)
Editing accuracy:	±0 frame (using time code)
Tape timer accuracy:	±1 frame (using continuous CTL signal)
Servo lock time:	Less than 0.5 sec. (color framing/ standby ON)

VIDEO

(Digital video)

Sampling frequencies:	Y; 13.5 MHz/PB, PR; 3.375 MHz
Quantizing:	8 bits
Error correction:	Reed-Solomon product code

(Digital IN/analog component OUT)

Video bandwidth:	Y; 30 Hz to 5.5 MHz (±0.5 dB) 5.75 MHz (–2 dB) PB, PR; 30 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–5 dB) typ.
S/N ratio:	Better than 60 dB
K factor:	Less than 1%

(Analog component IN/component OUT)

Video bandwidth:	Y; 30 Hz to 5.5 MHz (±1 dB) 5.75 MHz (–3 dB) PB, PR; 30 Hz to 1.3 MHz (±1 dB) 1.5 MHz (–6 dB) typ.
S/N ratio:	Better than 55 dB
K factor:	Less than 1%

(Analog composite IN/composite OUT)

Video bandwidth:	Y; 30 Hz to 4.5 MHz (±1 dB)
DG:	Less than 4%
DP:	Less than 3°
Y/C delay:	Better than 20 nsec
K factor:	Less than 2%

(Video input connector)

Analog component input:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.486/0.7 Vp-p switchable, 75Ω (75% color bar, 7.5% setup)
Analog composite input:	BNC×2, loop-through, 75Ω on/off
Reference input:	Analog composite BNC×2, loop-through, 75Ω on/off
Serial digital component input (option):	Complies with SMPTE 259M-C standard, BNC×2, active through

(Video output connector)

Analog component output:	BNC×3 (Y, PB, PR) Y; 1.0 Vp-p, 75Ω PB, PR; 0.486/0.7 Vp-p switchable, 75Ω (75% color bar, 7.5% setup)
Analog composite output:	BNC×3 Video1/video2/video3 (superimpose on/off)
Serial digital component output (option):	Complies with SMPTE 259M-C standard, BNC×3

(Video signals adjustment)

Composite video input signal:	±3 dB
Video output gain:	±3 dB
Video output chroma gain:	±3 dB
Video output hue:	±30°
Video output setup:	±15 IRE
Video output sync phase:	±15 µsec
Video output SC phase:	±180°
Video output Y/C delay:	±300 nsec

AUDIO

(Digital audio)

Sampling frequencies:	48 kHz
Quantizing:	16 bits
Frequency response:	20 Hz to 20 kHz ±1 dB
Dynamic range:	Better than 90 dB (1 kHz, emphasis OFF, “A” weighted)
Distortion:	Less than 0.05% (1 kHz, emphasis OFF, standard level)
Crosstalk:	Less than –80 dB (1 kHz, between 2 channels)
Wow & flutter:	Below measurable limit
Headroom:	20 dB
Emphasis:	T1=50 µsec/T2=15 µsec (on/off selectable)

(Cue track)

Frequency response:	300 Hz to 6 kHz ±3 dB

(Audio input connector)

Analog input (CH1/CH2):	XLR×2, 600Ω/high impedance selectable, +4/0/–20 dBu
Digital input (CH1/CH2):	XLR×1, AES/EBU format
Serial digital input (option):	Complies with SMPTE 259M-C, 272M standard (BNC, 75Ω)
Cue track input:	XLR×1, 600Ω/high impedance selectable, +4/0/–20/–60 dBu

(Audio output connector)

Analog output (CH1/CH2):	XLR×2, low impedance, +4/0/–20 dBu
Digital output (CH1/CH2):	XLR×1, AES/EBU format
Serial digital output (option):	Complies with SMPTE 259M-C, 272M standard (BNC, 75Ω)
Cue track output:	XLR×1, low impedance, +4/0/–20 dBu
Monitor output:	XLR×2, low impedance, +4/0/–20 dBu
Headphones:	Variable level, mini-jack, 8Ω

Other input/output connector

Time code input:	XLR×1, 0.5 to 8 Vp-p
Time code output:	XLR×1, 2.0 Vp-p
RS-422A input/output:	D-sub 9-pin, RS-422A interface
RS-422A output:	D-sub 9-pin, RS-422A interface
RS-232C:	D-sub 25-pin, RS-232C interface
Parallel input/output:	D-sub 25-pin
Encoder remote:	D-sub 15-pin

Weight and dimensions shown are approximately.
Specifications are subject to change without notice.

Panasonic

PANASONIC BROADCAST & DIGITAL SYSTEMS COMPANY
DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA

Executive Office:
3330 Cahuenga Blvd W., Los Angeles, CA 90068 (323) 436-3500
EASTERN ZONE:
One Panasonic Way 4E-7, Secaucus, NJ 07094 (201) 348-7621
Mid-Atlantic/New England:
One Panasonic Way 4E-7, Secaucus, NJ 07094 (201) 348-7621
Southeast Region:
1225 Northbrook Parkway, Ste 1-160 Suwanee, GA 30024 (770) 338-6835
Central Region:
1707 N Randall Road E1-C-1, Elgin, IL 60123 (847) 468-5200
WESTERN ZONE:
3330 Cahuenga Blvd W., Los Angeles, CA 90068 (323) 436-3500
Dallas Region:
6226 Abington Way, Houston, TX 77008 (713) 802-2726
No. CA/Northwest Region:
5870 Stoneridge, #3, Pleasanton, CA 94588 (925) 416-5108
Government Marketing Department:
52 West Gude Drive, Rockville, MD 20850 (301) 738-3840

PARTS INFORMATION & ORDERING:
9:00 a.m. – 5:00 p.m. (EST) (800) 334-4881/24 Hr. Fax (800) 334-4880
TECHNICAL SUPPORT:
Emergency 24 Hour Parts & Service (800) 222-0741
TRAINING INFORMATION:
Digital System Products - (201) 392-6852

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga, Ontario L4W 2T3 (905) 624-5010

Panasonic de Mexico S.A. de C.V.
Av angel Urraza Num. 1209 Col. de Valle 03100 Mexico, D.F. (52) 1 951 2127

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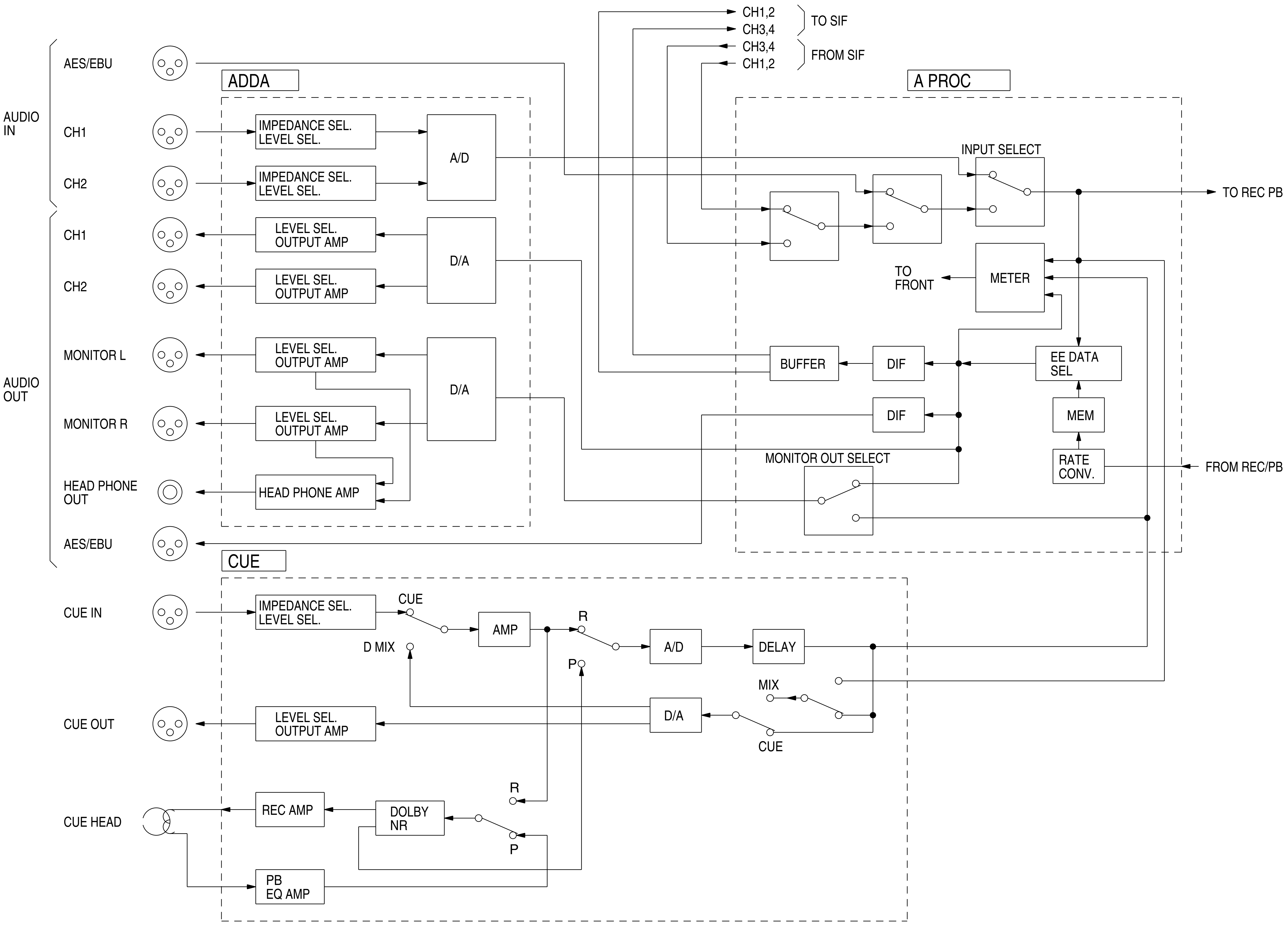
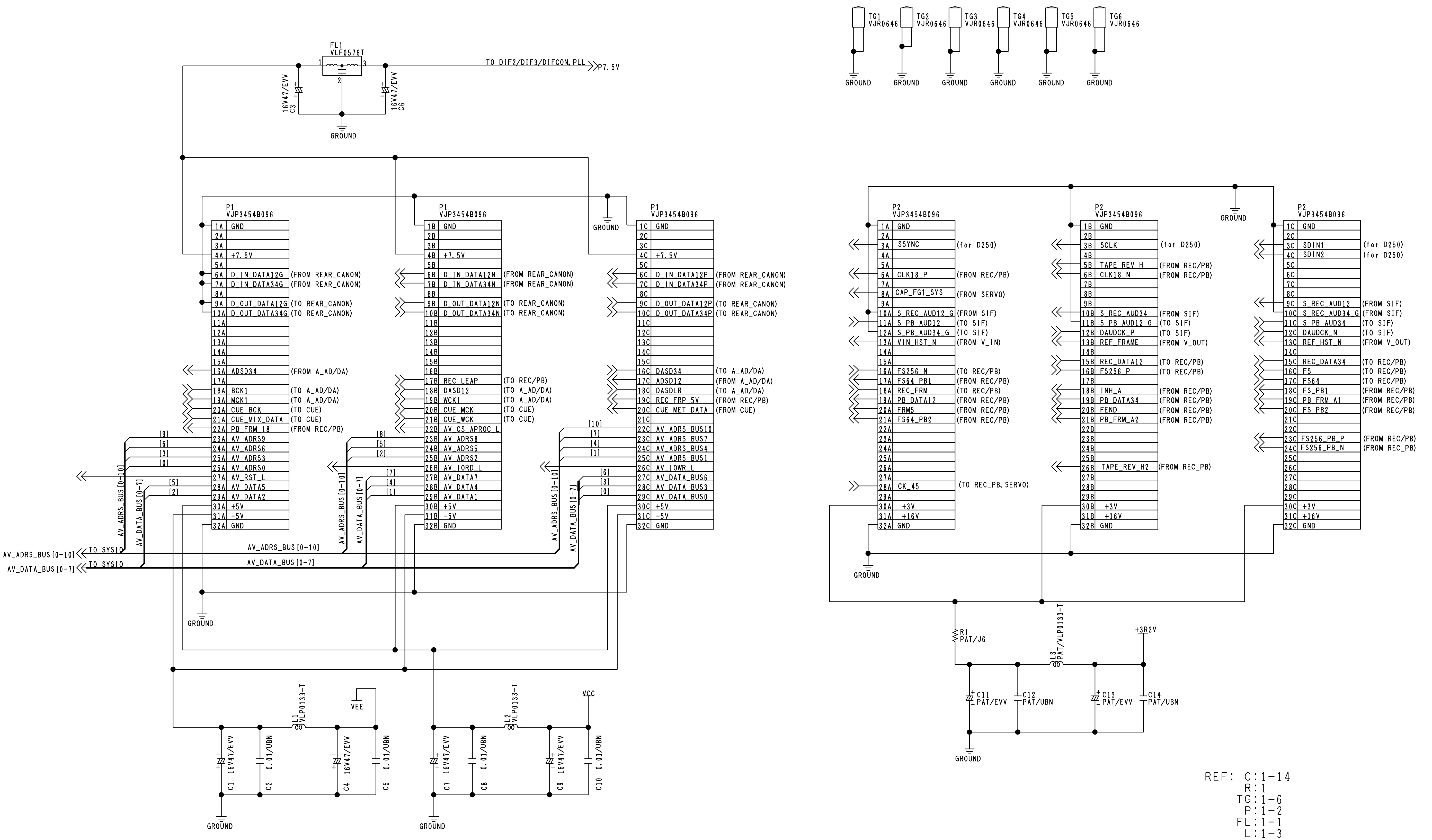
S0299H100 Ⓐ P

AUDIO OVERALL BLOCK DIAGRAM

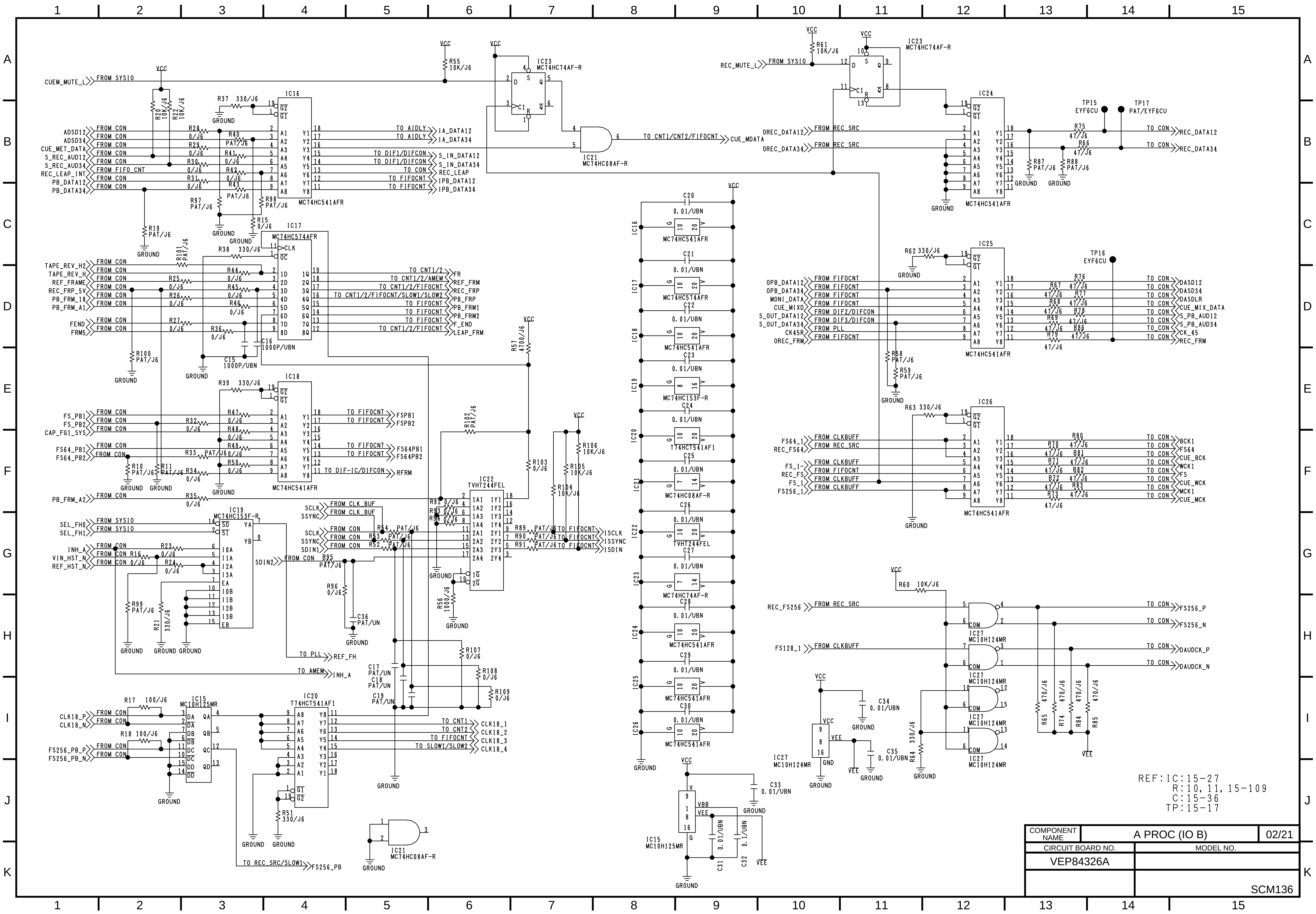


CH1,2
CH3,4
TO SIF
CH3,4
CH1,2
FROM SIF
A PROC
ADDA
AUDIO IN
AES/EBU
CH1
CH2
IMPEDANCE SEL.
LEVEL SEL.
IMPEDANCE SEL.
LEVEL SEL.
A/D
INPUT SELECT
TO REC PB
AUDIO OUT
CH1
CH2
LEVEL SEL.
OUTPUT AMP
LEVEL SEL.
OUTPUT AMP
D/A
METER
TO FRONT
MONITOR L
MONITOR R
LEVEL SEL.
OUTPUT AMP
LEVEL SEL.
OUTPUT AMP
D/A
BUFFER
DIF
EE DATA SEL
DIF
MEM
MONITOR OUT SELECT
RATE CONV.
FROM REC/PB
HEAD PHONE OUT
HEAD PHONE AMP
AES/EBU
CUE
CUE IN
IMPEDANCE SEL.
LEVEL SEL.
CUE
D MIX
AMP
R
P
A/D
DELAY
MIX
CUE OUT
LEVEL SEL.
OUTPUT AMP
D/A
CUE
R
CUE HEAD
REC AMP
DOLBY NR
P
PB EQ AMP


FL1
VLF0576T
TO DIF2/DIF3/DIFCON, PLL
P7.5V
C3 16V47/EVV
C6 16V47/EVV
GROUND
TG1 VJR0646
TG2 VJR0646
TG3 VJR0646
TG4 VJR0646
TG5 VJR0646
TG6 VJR0646
P1 VJP3454B096
1A GND
4A +7.5V
6A D_IN_DATA12G (FROM REAR_CANON)
7A D_IN_DATA34G (FROM REAR_CANON)
9A D_OUT_DATA12G (TO REAR_CANON)
10A D_OUT_DATA34G (TO REAR_CANON)
16A ADSD34 (FROM A_AD/DA)
18A BCK1 (TO A_AD/DA)
19A MCK1 (TO A_AD/DA)
20A CUE_BCK (TO CUE)
21A CUE_MIX_DATA (TO CUE)
22A PB_FRM_18 (FROM REC/PB)
23A AV_ADRS9
24A AV_ADRS6
25A AV_ADRS3
26A AV_ADRS0
27A AV_RST_L
28A AV_DATA5
29A AV_DATA2
30A +5V
31A -5V
32A GND
1B GND
4B +7.5V
6B D_IN_DATA12N (FROM REAR_CANON)
7B D_IN_DATA34N (FROM REAR_CANON)
9B D_OUT_DATA12N (TO REAR_CANON)
10B D_OUT_DATA34N (TO REAR_CANON)
17B REC_LEAP (TO REC/PB)
18B DASD12 (TO A_AD/DA)
19B WCK1 (TO A_AD/DA)
20B CUE_MCK (TO CUE)
21B CUE_WCK (TO CUE)
22B AV_CS_APROC_L
23B AV_ADRS8
24B AV_ADRS5
25B AV_ADRS2
26B AV_IORD_L
27B AV_DATA7
28B AV_DATA4
29B AV_DATA1
30B +5V
31B -5V
32B GND
1C GND
4C +7.5V
6C D_IN_DATA12P (FROM REAR_CANON)
7C D_IN_DATA34P (FROM REAR_CANON)
9C D_OUT_DATA12P (TO REAR_CANON)
10C D_OUT_DATA34P (TO REAR_CANON)
16C DASD34 (TO A_AD/DA)
17C ADSD12 (FROM A_AD/DA)
18C DASDLR (TO A_AD/DA)
19C REC_FRP_5V (FROM REC/PB)
20C CUE_MET_DATA (FROM CUE)
22C AV_ADRS_BUS10
23C AV_ADRS_BUS7
24C AV_ADRS_BUS4
25C AV_ADRS_BUS1
26C AV_IOWR_L
27C AV_DATA_BUS6
28C AV_DATA_BUS3
29C AV_DATA_BUS0
30C +5V
31C -5V
32C GND
AV_ADRS_BUS[0-10]
AV_DATA_BUS[0-7]
TO SYSIO
P2 VJP3454B096
1A GND
3A SSYNC (for D250)
6A CLK18_P (FROM REC/PB)
8A CAP_FG1_SYS (FROM SERVO)
10A S_REC_AUD12_G (FROM SIF)
11A S_PB_AUD12 (TO SIF)
12A S_PB_AUD34_G (TO SIF)
13A VIN_HST_N (FROM V_IN)
16A FS256_N (TO REC/PB)
17A FS64_PB1 (FROM REC/PB)
18A REC_FRM (TO REC/PB)
19A PB_DATA12 (FROM REC/PB)
20A FRM5 (FROM REC/PB)
21A FS64_PB2 (FROM REC/PB)
28A CK_45 (TO REC_PB, SERVO)
30A +3V
31A +16V
32A GND
1B GND
3B SCLK (for D250)
5B TAPE_REV_H (FROM REC/PB)
6B CLK18_N (FROM REC/PB)
10B S_REC_AUD34 (FROM SIF)
11B S_PB_AUD12_G (TO SIF)
12B DAUDCK_P (TO SIF)
13B REF_FRAME (FROM V_OUT)
15B REC_DATA12 (TO REC/PB)
16B FS256_P (TO REC/PB)
18B INH_A (FROM REC/PB)
19B PB_DATA34 (FROM REC/PB)
20B FEND (FROM REC/PB)
21B PB_FRM_A2 (FROM REC/PB)
26B TAPE_REV_H2 (FROM REC_PB)
30B +3V
31B +16V
32B GND
1C GND
3C SDIN1 (for D250)
4C SDIN2 (for D250)
9C S_REC_AUD12 (FROM SIF)
10C S_REC_AUD34_G (FROM SIF)
11C S_PB_AUD34 (TO SIF)
12C DAUDCK_N (TO SIF)
13C REF_HST_N (FROM V_OUT)
15C REC_DATA34 (TO REC/PB)
16C FS (TO REC/PB)
17C FS64 (TO REC/PB)
18C FS_PB1 (FROM REC/PB)
19C PB_FRM_A1 (FROM REC/PB)
20C FS_PB2 (FROM REC/PB)
23C FS256_PB_P (FROM REC_PB)
24C FS256_PB_N (FROM REC_PB)
30C +3V
31C +16V
32C GND
R1 PAT/J6
L3 PAT/VLP0133-T
+3R2V
C11 PAT/EVV
C12 PAT/UBN
C13 PAT/EVV
C14 PAT/UBN
L1 VLP0133-T
VEE
C1 16V47/EVV
C2 0.01/UBN
C4 16V47/EVV
C5 0.01/UBN
L2 VLP0133-T
VCC
C7 16V47/EVV
C8 0.01/UBN
C9 16V47/EVV
C10 0.01/UBN

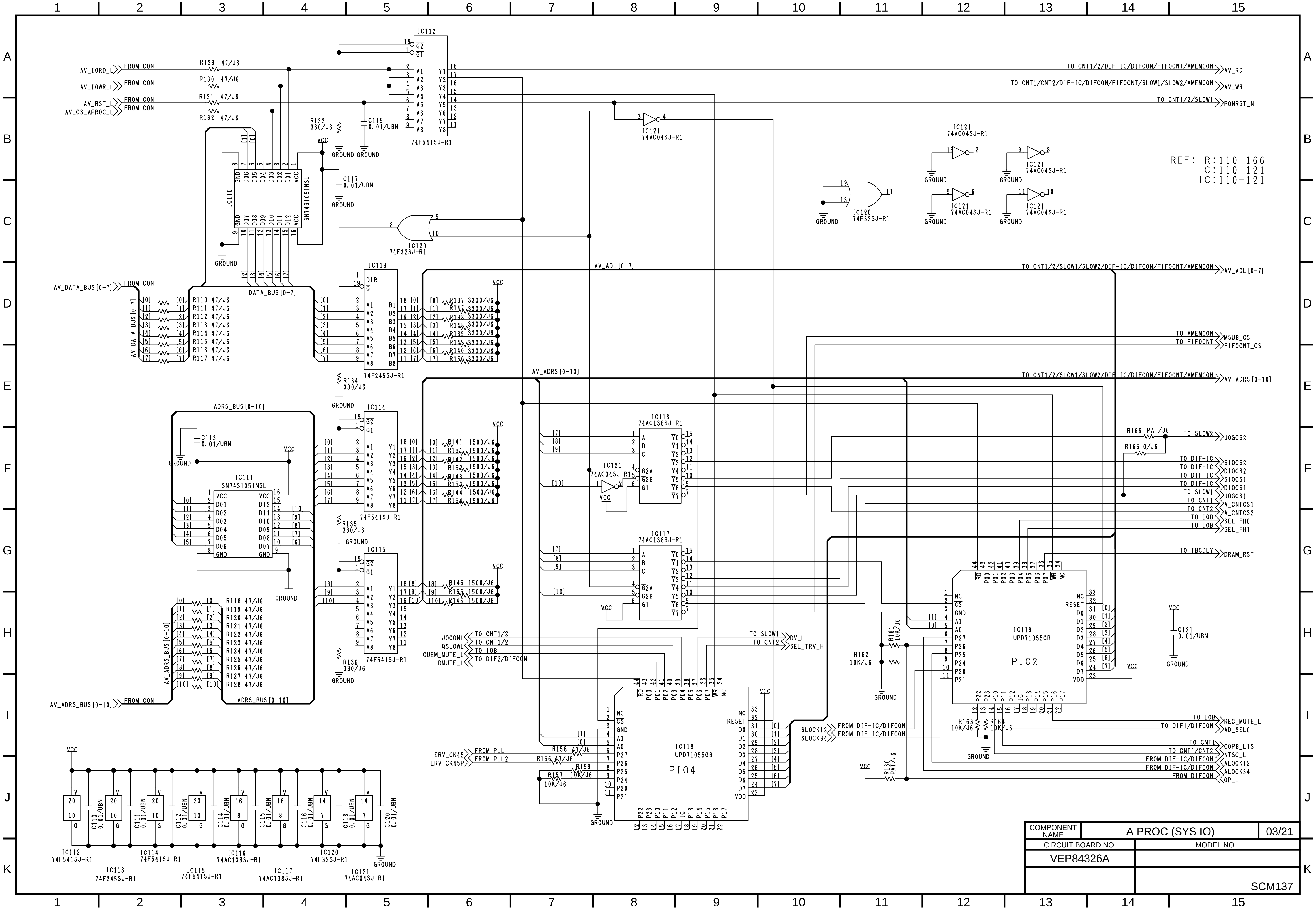
REF: C:1-14
R:1
TG:1-6
P:1-2
FL:1-1
L:1-3

COMPONENT NAME	A PROC (CONNECTOR)	01/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM135	

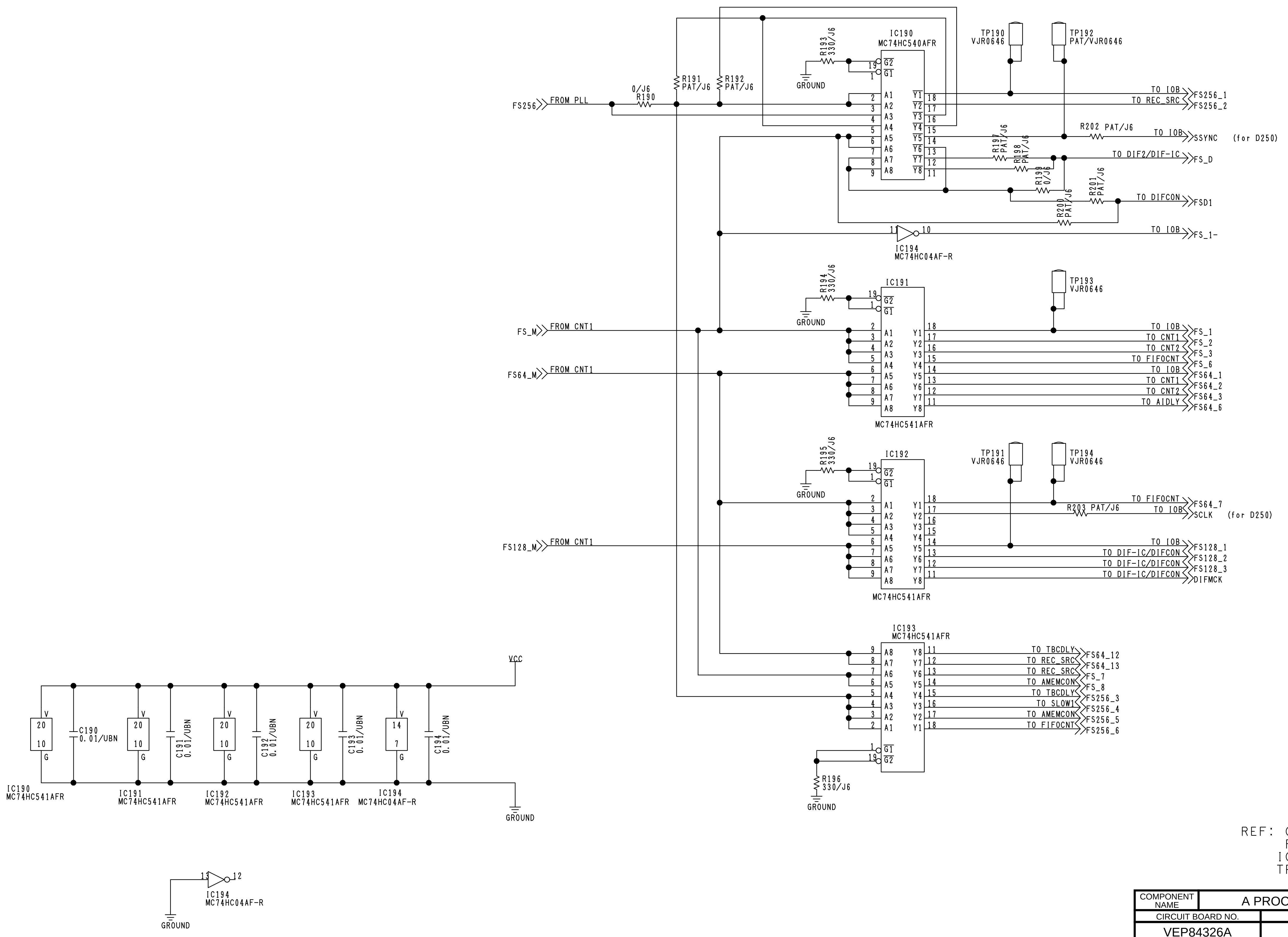

IC16 MC74HC541AFR
IC17 MC74HC574AFR
IC18 MC74HC541AFR
IC19 MC74HC153F-R
IC15 MC10H125MR
IC20 T74HCT541AF1
IC21 MC74HC08AF-R
IC22 TVHT244FEL
IC23 MC74HC74AF-R
IC24 MC74HC541AFR
IC25 MC74HC541AFR
IC26 MC74HC541AFR
IC27 MC10H124MR
CUEM_MUTE_L
FROM SYSIO
REC_MUTE_L
ADSD12
ADSD34
CUE_MET_DATA
S_REC_AUD12
S_REC_AUD34
REC_LEAP_INT
PB_DATA12
PB_DATA34
FROM CON
FROM FIFO_CNT
TO AIDLY
IA_DATA12
IA_DATA34
TO DIF1/DIFCON
S_IN_DATA12
S_IN_DATA34
TO CON
REC_LEAP
TO FIFOCNT
IPB_DATA12
IPB_DATA34
TO CNT1/CNT2/FIFOCNT
CUE_MDATA
TAPE_REV_H2
TAPE_REV_H
REF_FRAME
REC_FRP_5V
PB_FRM_18
PB_FRM_A1
FEND
FRM5
TO CNT1/2
FR
TO CNT1/2/AMEM
REF_FRM
TO CNT1/2/FIFOCNT
REC_FRP
TO CNT1/2/FIFOCNT/SLOW1/SLOW2
PB_FRP
PB_FRM1
TO FIFOCNT
PB_FRM2
TO DIFCON
F_END
LEAP_FRM
FS_PB1
FS_PB2
CAP_FG1_SYS
FS64_PB1
FS64_PB2
FSPB1
FSPB2
FS64PB1
FS64PB2
TO DIF-IC/DIFCON
RFRM
PB_FRM_A2
SEL_FH0
SEL_FH1
INH_A
VIN_HST_N
REF_HST_N
SDIN2
FROM CLK_BUF
SCLK
SSYNC
SDIN1
ISCLK
ISSYNC
ISDIN
TO PLL
REF_FH
TO AMEM
INH_A
CLK18_P
CLK18_N
FS256_PB_P
FS256_PB_N
CLK18_1
CLK18_2
CLK18_3
CLK18_4
TO SLOW1/SLOW2
TO REC_SRC/SLOW1
FS256_PB
OREC_DATA12
OREC_DATA34
FROM REC_SRC
REC_DATA12
REC_DATA34
TP15 EYF6CU
TP17 PAT/EYF6CU
TP16 EYF6CU
OPB_DATA12
OPB_DATA34
MONI_DATA
CUE_MIXD
S_OUT_DATA12
S_OUT_DATA34
CK45R
OREC_FRM
FROM FIFOCNT
FROM DIF2/DIFCON
FROM DIF3/DIFCON
FROM PLL
DASD12
DASD34
DASDLR
CUE_MIX_DATA
S_PB_AUD12
S_PB_AUD34
CK_45
REC_FRM
FS64_1
REC_FS64
FS_1
REC_FS
FS_1
FS256_1
FROM CLKBUFF
BCK1
FS64
CUE_BCK
WCK1
FS
CUE_WCK
MCK1
CUE_MCK
REC_FS256
FS256_P
FS256_N
FS128_1
DAUDCK_P
DAUDCK_N
VCC
VEE
GROUND

REF:IC:15-27
R:10,11,15-109
C:15-36
TP:15-17

COMPONENT NAME	A PROC (IO B)	02/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM136	

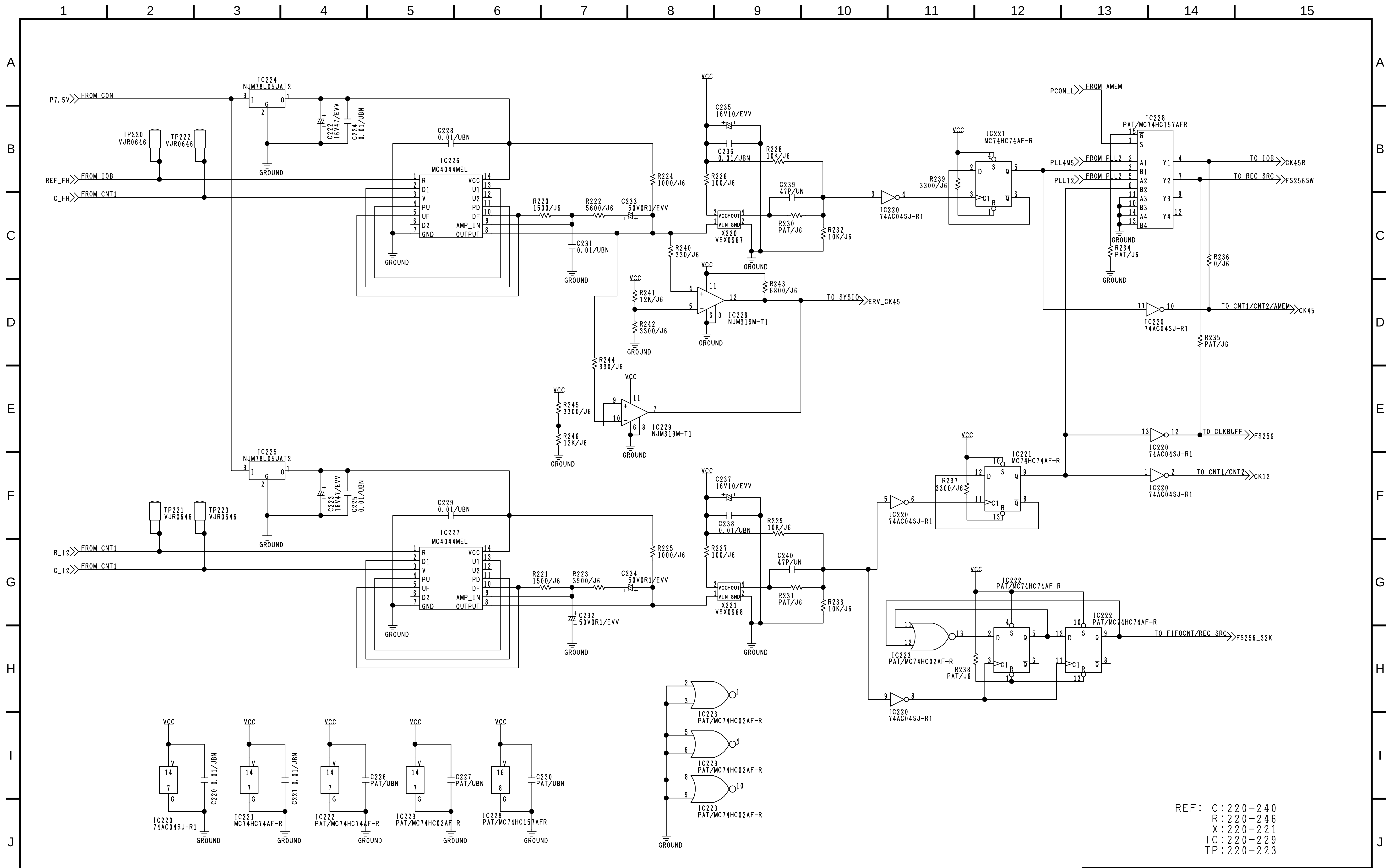

AV_IORD_L
AV_IOWR_L
AV_RST_L
AV_CS_APROC_L
FROM CON
R129 47/J6
R130 47/J6
R131 47/J6
R132 47/J6
IC112
74F541SJ-R1
R133 330/J6
C119 0.01/UBN
GROUND
VCC
TO CNT1/2/DIF-IC/DIFCON/FIFOCNT/AMEMCON
AV_RD
TO CNT1/CNT2/DIF-IC/DIFCON/FIFOCNT/SLOW1/SLOW2/AMEMCON
AV_WR
TO CNT1/2/SLOW1
PONRST_N
IC121
74AC04SJ-R1
IC110
SN74S1051NSL
C117 0.01/UBN
IC120
74F32SJ-R1
REF: R:110-166
C:110-121
IC:110-121
AV_DATA_BUS[0-7]
DATA_BUS[0-7]
R110 47/J6
R111 47/J6
R112 47/J6
R113 47/J6
R114 47/J6
R115 47/J6
R116 47/J6
R117 47/J6
IC113
74F245SJ-R1
R134 330/J6
AV_ADL[0-7]
TO CNT1/2/SLOW1/SLOW2/DIF-IC/DIFCON/FIFOCNT/AMEMCON
AV_ADL[0-7]
R137 3300/J6
R147 3300/J6
R138 3300/J6
R148 3300/J6
R139 3300/J6
R149 3300/J6
R140 3300/J6
R150 3300/J6
TO AMEMCON
MSUB_CS
TO FIFOCNT
FIFOCNT_CS
AV_ADRS[0-10]
AV_ADRS[0-10]
ADRS_BUS[0-10]
C113 0.01/UBN
IC111
SN74S1051NSL
IC114
74F541SJ-R1
R135 330/J6
R141 1500/J6
R151 1500/J6
R142 1500/J6
R152 1500/J6
R143 1500/J6
R153 1500/J6
R144 1500/J6
R154 1500/J6
IC115
74F541SJ-R1
R145 1500/J6
R155 1500/J6
R146 1500/J6
R136 330/J6
IC116
74AC138SJ-R1
IC117
74AC138SJ-R1
R166 PAT/J6
TO SLOW2
JOGCS2
R165 0/J6
TO DIF-IC
SIOCS2
DIOCS2
SIOCS1
DIOCS1
TO SLOW1
JOGCS1
TO CNT1
A_CNTCS1
TO CNT2
A_CNTCS2
TO IOB
SEL_FH0
SEL_FH1
TO TBCDLY
DRAM_RST
R118 47/J6
R119 47/J6
R120 47/J6
R121 47/J6
R122 47/J6
R123 47/J6
R124 47/J6
R125 47/J6
R126 47/J6
R127 47/J6
R128 47/J6
AV_ADRS_BUS[0-10]
ADRS_BUS[0-10]
JOGONL
QSLOWL
CUEM_MUTE_L
DMUTE_L
TO CNT1/2
TO IOB
TO DIF2/DIFCON
TO SLOW1
TO CNT2
DV_H
SEL_TRV_H
IC119
UPD71055GB
PIO2
R161 10K/J6
R162 10K/J6
C121 0.01/UBN
IC118
UPD71055GB
PIO4
ERV_CK45
ERV_CK45P
FROM PLL
FROM PLL2
R158 47/J6
R156 47/J6
R159
R157 10K/J6
SLOCK12
SLOCK34
FROM DIF-IC/DIFCON
R163 10K/J6
R164 10K/J6
R160 PAT/J6
REC_MUTE_L
TO DIF1/DIFCON
AD_SEL0
COPB_L1S
TO CNT1/CNT2
NTSC_L
ALOCK12
ALOCK34
FROM DIFCON
OP_L
C110 0.01/UBN
C111 0.01/UBN
C112 0.01/UBN
C114 0.01/UBN
C115 0.01/UBN
C116 0.01/UBN
C118 0.01/UBN
C120 0.01/UBN
IC112 74F541SJ-R1
IC113 74F245SJ-R1
IC114 74F541SJ-R1
IC115 74F541SJ-R1
IC116 74AC138SJ-R1
IC117 74AC138SJ-R1
IC120 74F32SJ-R1
IC121 74AC04SJ-R1

COMPONENT NAME	A PROC (SYS IO)	03/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM137	

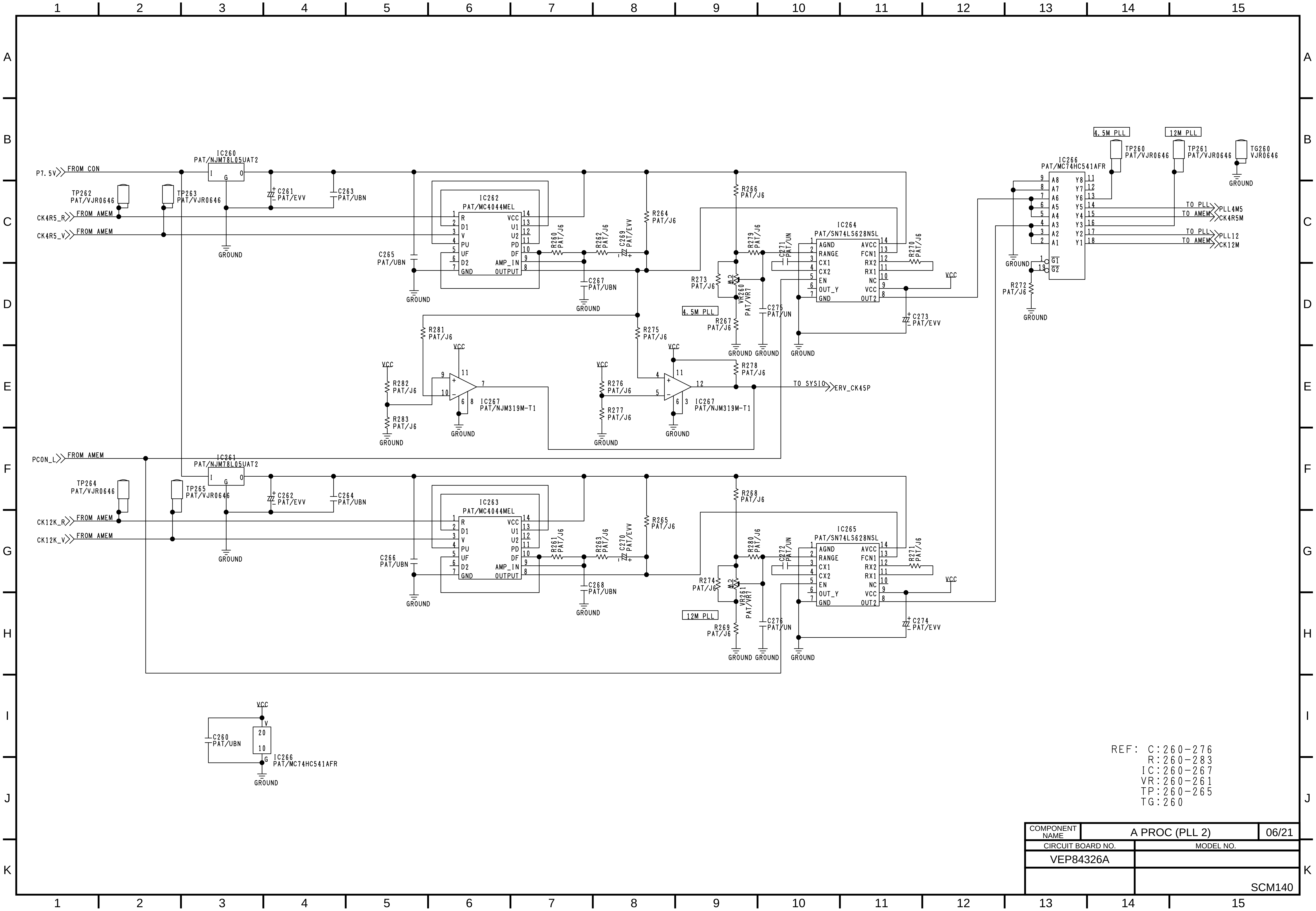

FS256
FROM PLL
0/J6
R190
R191
PAT/J6
R192
PAT/J6
R193
330/J6
GROUND
IC190
MC74HC540AFR
TP190
VJR0646
TP192
PAT/VJR0646
TO IOB
FS256_1
TO REC_SRC
FS256_2
R202 PAT/J6
TO IOB
SSYNC (for D250)
R197
PAT/J6
R198
PAT/J6
TO DIF2/DIF-IC
FS_D
R199
0/J6
R201
PAT/J6
TO DIFCON
FSD1
R200
PAT/J6
TO IOB
FS_1-
IC194
MC74HC04AF-R
R194
330/J6
IC191
TP193
VJR0646
FS_M
FROM CNT1
TO IOB
FS_1
TO CNT1
FS_2
TO CNT2
FS_3
TO FIFOCNT
FS_6
FS64_M
FROM CNT1
TO IOB
FS64_1
TO CNT1
FS64_2
TO CNT2
FS64_3
TO AIDLY
FS64_6
MC74HC541AFR
R195
330/J6
IC192
TP191
VJR0646
TP194
VJR0646
TO FIFOCNT
FS64_7
R203 PAT/J6
TO IOB
SCLK (for D250)
FS128_M
FROM CNT1
TO IOB
FS128_1
TO DIF-IC/DIFCON
FS128_2
TO DIF-IC/DIFCON
FS128_3
TO DIF-IC/DIFCON
DIFMCK
MC74HC541AFR
IC193
MC74HC541AFR
TO TBCDLY
FS64_12
TO REC_SRC
FS64_13
TO REC_SRC
FS_7
TO AMEMCON
FS_8
TO TBCDLY
FS256_3
TO SLOW1
FS256_4
TO AMEMCON
FS256_5
TO FIFOCNT
FS256_6
R196
330/J6
GROUND
VCC
C190
0.01/UBN
C191
0.01/UBN
C192
0.01/UBN
C193
0.01/UBN
C194
0.01/UBN
IC190
MC74HC541AFR
IC191
MC74HC541AFR
IC192
MC74HC541AFR
IC193
MC74HC541AFR
IC194
MC74HC04AF-R
GROUND
IC194
MC74HC04AF-R
GROUND

REF: C:190-194
R:190-203
IC:190-194
TP:190-194

COMPONENT NAME	A PROC (CLK BUFF)	04/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM138	

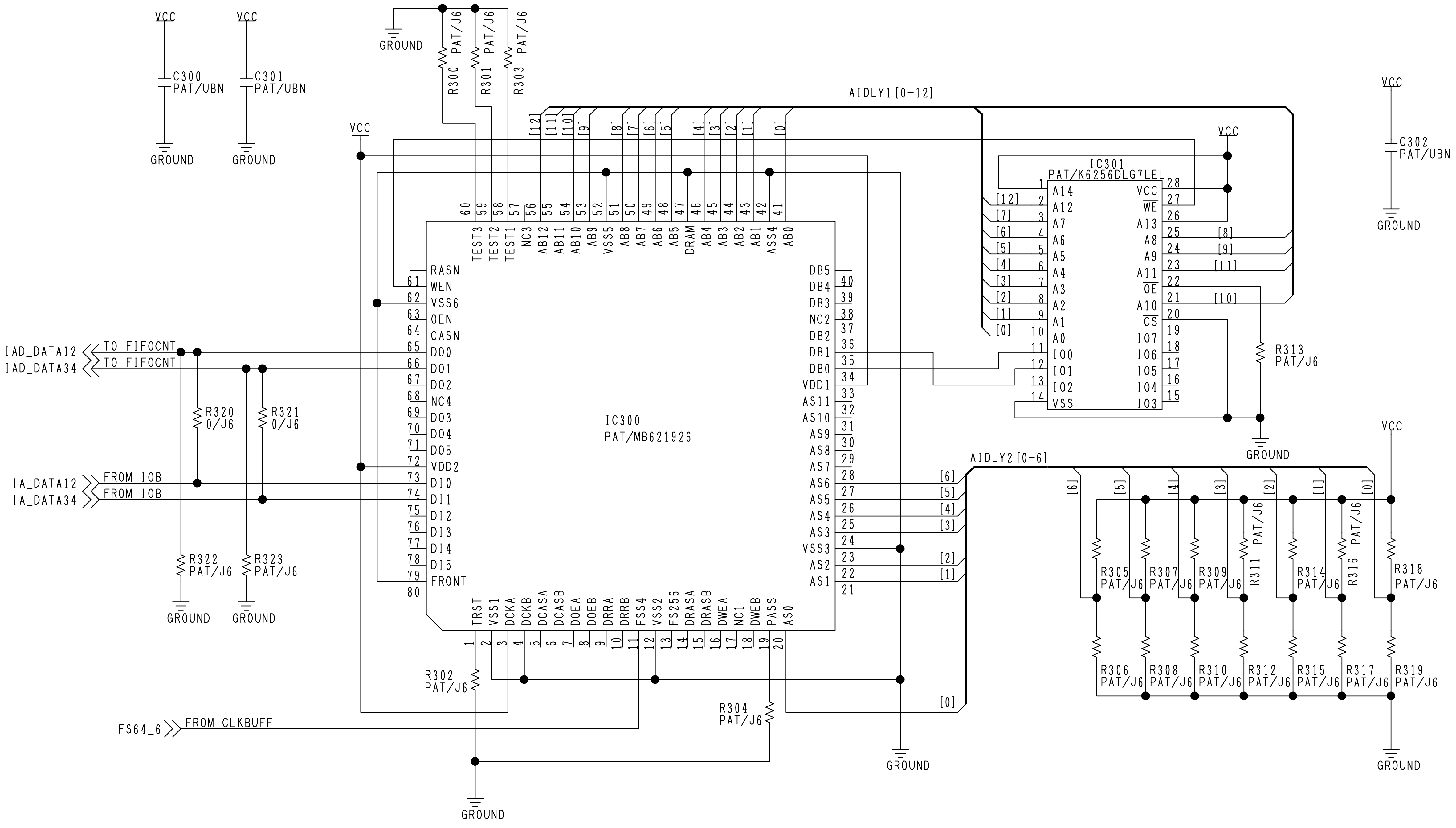

P7.5V FROM CON
IC224 NJM78L05UAT2
C222 16V47/EVV
C224 0.01/UBN
TP220 VJR0646
TP222 VJR0646
REF_FH FROM IOB
C_FH FROM CNT1
C228 0.01/UBN
IC226 MC4044MEL
R D1 V PU UF D2 GND VCC U1 U2 PD DF AMP_IN OUTPUT
R220 1500/J6
R222 5600/J6
C233 50V0R1/EVV
C231 0.01/UBN
R224 1000/J6
R240 330/J6
GROUND
VCC
C235 16V10/EVV
C236 0.01/UBN
R226 100/J6
R228 10K/J6
C239 47P/UN
R230 PAT/J6
R232 10K/J6
X220 VSX0967
VCCFOUT VIN GND
R241 12K/J6
R242 3300/J6
R243 6800/J6
IC229 NJM319M-T1
TO SYSIO ERV_CK45
R244 330/J6
R245 3300/J6
R246 12K/J6
IC229 NJM319M-T1
IC220 74AC04SJ-R1
R239 3300/J6
IC221 MC74HC74AF-R
PCON_L FROM AMEM
IC228 PAT/MC74HC157AFR
PLL4M5 FROM PLL2
PLL12 FROM PLL2
TO IOB CK45R
TO REC_SRC FS256SW
R234 PAT/J6
R236 0/J6
R235 PAT/J6
TO CNT1/CNT2/AMEM CK45
TO CLKBUFF FS256
TO CNT1/CNT2 CK12
R237 3300/J6
IC225 NJM78L05UAT2
C223 16V47/EVV
C225 0.01/UBN
TP221 VJR0646
TP223 VJR0646
R_12 FROM CNT1
C_12 FROM CNT1
C229 0.01/UBN
IC227 MC4044MEL
R221 1500/J6
R223 3900/J6
C234 50V0R1/EVV
C232 50V0R1/EVV
R225 1000/J6
C237 16V10/EVV
C238 0.01/UBN
R227 100/J6
R229 10K/J6
C240 47P/UN
R231 PAT/J6
R233 10K/J6
X221 VSX0968
IC222 PAT/MC74HC74AF-R
IC223 PAT/MC74HC02AF-R
R238 PAT/J6
TO FIFOCNT/REC_SRC FS256_32K
IC223 PAT/MC74HC02AF-R
C220 0.01/UBN
C221 0.01/UBN
C226 PAT/UBN
C227 PAT/UBN
C230 PAT/UBN
IC220 74AC04SJ-R1
IC221 MC74HC74AF-R
IC222 PAT/MC74HC74AF-R
IC223 PAT/MC74HC02AF-R
IC228 PAT/MC74HC157AFR
REF: C:220-240
R:220-246
X:220-221
IC:220-229
TP:220-223

COMPONENT NAME	A PROC (PLL 1)	05/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM139	


P7.5V FROM CON
IC260 PAT/NJM78L05UAT2
C261 PAT/EVV
C263 PAT/UBN
TP262 PAT/VJR0646
TP263 PAT/VJR0646
CK4R5_R FROM AMEM
CK4R5_V FROM AMEM
IC262 PAT/MC4044MEL
R V PU UF D2 GND VCC U1 U2 PD DF AMP_IN OUTPUT
C265 PAT/UBN
R260 PAT/J6
R262 PAT/J6
C269 PAT/EVV
C267 PAT/UBN
R264 PAT/J6
R266 PAT/J6
R279 PAT/J6
C271 PAT/UN
IC264 PAT/SN74LS628NSL
AGND RANGE CX1 CX2 EN OUT_Y GND AVCC FCN1 RX2 RX1 NC VCC OUT2
R270 PAT/J6
R273 PAT/J6
VR260 PAT/VR7
C275 PAT/UN
R267 PAT/J6
4.5M PLL
C273 PAT/EVV
R281 PAT/J6
R275 PAT/J6
R282 PAT/J6
R283 PAT/J6
IC267 PAT/NJM319M-T1
R276 PAT/J6
R277 PAT/J6
R278 PAT/J6
TO SYSIO ERV_CK45P
IC266 PAT/MC74HC541AFR
A8 A7 A6 A5 A4 A3 A2 A1 Y8 Y7 Y6 Y5 Y4 Y3 Y2 Y1 G1 G2
TP260 PAT/VJR0646
TP261 PAT/VJR0646
TG260 VJR0646
4.5M PLL
12M PLL
TO PLL PLL4M5
TO AMEM CK4R5M
TO PLL PLL12
TO AMEM CK12M
R272 PAT/J6
PCON_L FROM AMEM
IC261 PAT/NJM78L05UAT2
C262 PAT/EVV
C264 PAT/UBN
TP264 PAT/VJR0646
TP265 PAT/VJR0646
CK12K_R FROM AMEM
CK12K_V FROM AMEM
IC263 PAT/MC4044MEL
C266 PAT/UBN
R261 PAT/J6
R263 PAT/J6
C270 PAT/EVV
C268 PAT/UBN
R265 PAT/J6
R268 PAT/J6
R280 PAT/J6
C272 PAT/UN
IC265 PAT/SN74LS628NSL
R271 PAT/J6
R274 PAT/J6
VR261 PAT/VR7
C276 PAT/UN
R269 PAT/J6
12M PLL
C274 PAT/EVV
C260 PAT/UBN
IC266 PAT/MC74HC541AFR
VCC
GROUND

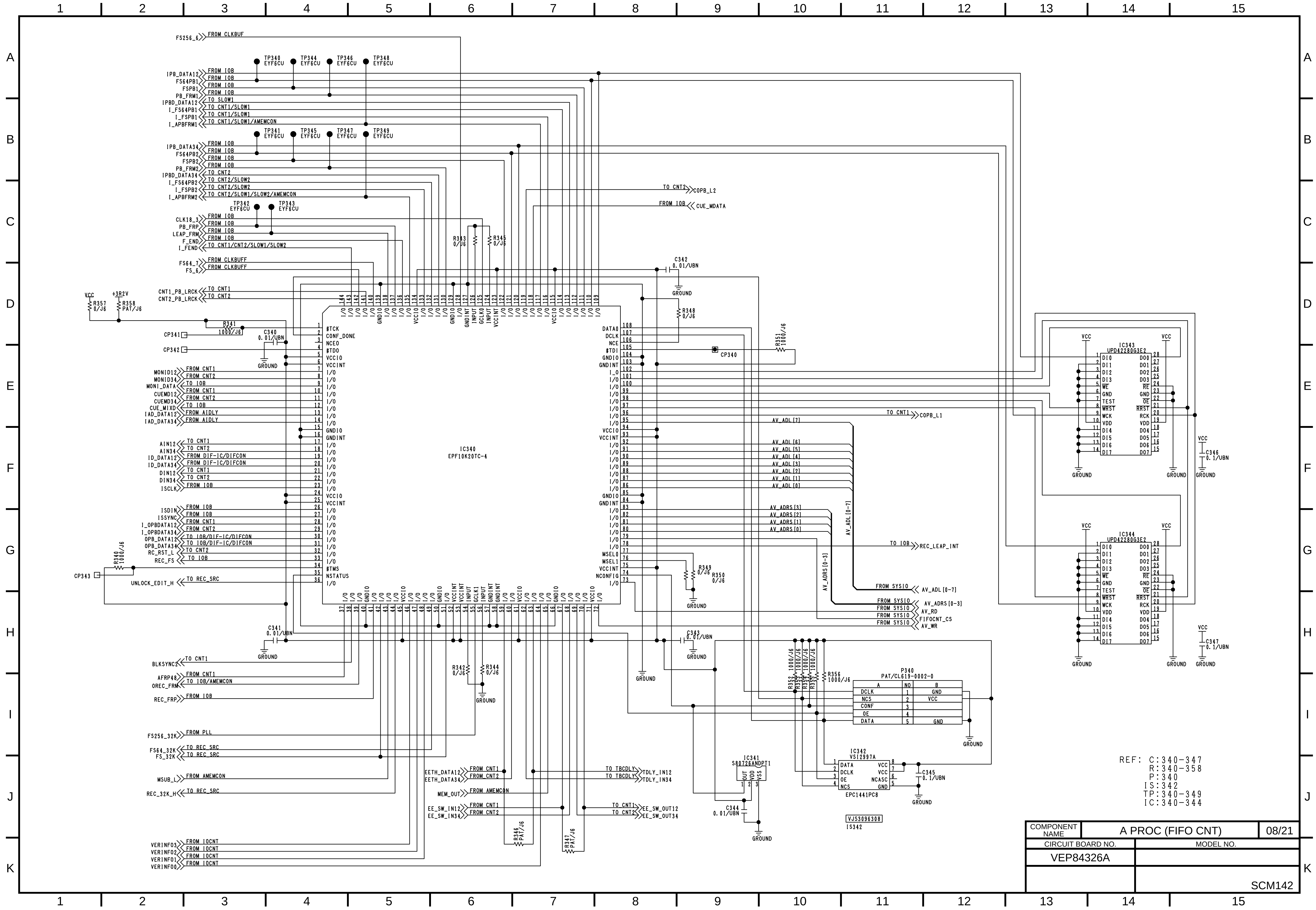
REF: C:260-276
R:260-283
IC:260-267
VR:260-261
TP:260-265
TG:260

COMPONENT NAME	A PROC (PLL 2)	06/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM140	


VCC
C300
PAT/UBN
GROUND
C301
PAT/UBN
R300 PAT/J6
R301 PAT/J6
R303 PAT/J6
AIDLY1[0-12]
IC300
PAT/MB621926
IC301
PAT/K6256DLG7LEL
TEST3
TEST2
TEST1
NC3
AB12
AB11
AB10
AB9
VSS5
AB8
AB7
AB6
AB5
DRAM
AB4
AB3
AB2
AB1
ASS4
AB0
RASN
WEN
VSS6
OEN
CASN
DO0
DO1
DO2
NC4
DO3
DO4
DO5
VDD2
DI0
DI1
DI2
DI3
DI4
DI5
FRONT
DB5
DB4
DB3
NC2
DB2
DB1
DB0
VDD1
AS11
AS10
AS9
AS8
AS7
AS6
AS5
AS4
AS3
VSS3
AS2
AS1
TRST
VSS1
DCKA
DCKB
DCASA
DCASB
DOEA
DOEB
DRRA
DRRB
FSS4
VSS2
FS256
DRASA
DRASB
DWEA
NC1
DWEB
PASS
AS0
A14
A12
A7
A6
A5
A4
A3
A2
A1
A0
IO0
IO1
IO2
VSS
VCC
WE
A13
A8
A9
A11
OE
A10
CS
IO7
IO6
IO5
IO4
IO3
IAD_DATA12
IAD_DATA34
TO FIFOCNT
TO FIFOCNT
IA_DATA12
IA_DATA34
FROM IOB
FROM IOB
R320 0/J6
R321 0/J6
R322 PAT/J6
R323 PAT/J6
R302 PAT/J6
R304 PAT/J6
FS64_6
FROM CLKBUFF
R313 PAT/J6
C302 PAT/UBN
AIDLY2[0-6]
R305 PAT/J6
R306 PAT/J6
R307 PAT/J6
R308 PAT/J6
R309 PAT/J6
R310 PAT/J6
R311 PAT/J6
R312 PAT/J6
R314 PAT/J6
R315 PAT/J6
R316 PAT/J6
R317 PAT/J6
R318 PAT/J6
R319 PAT/J6

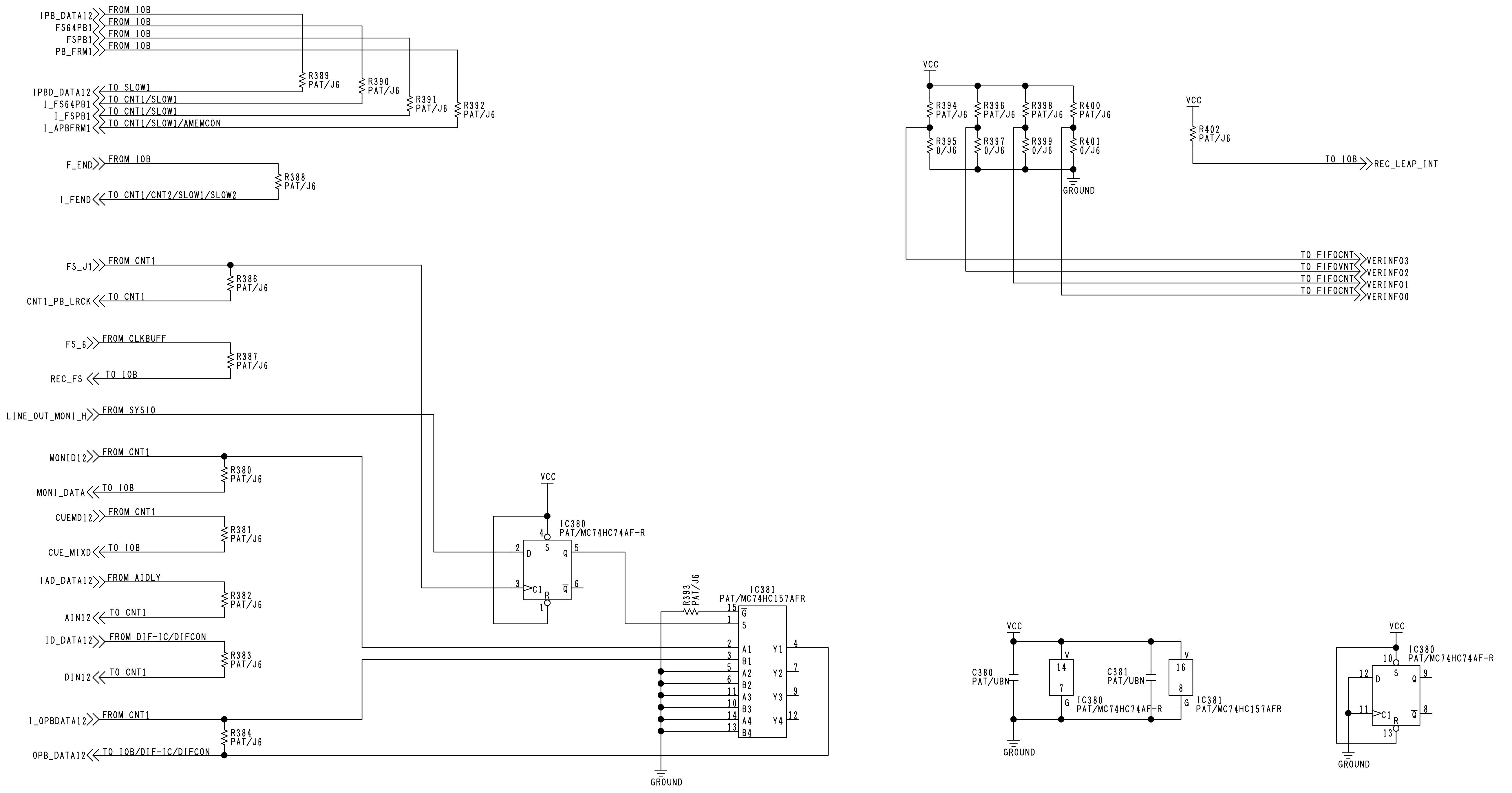
REF: C:300-302
R:300-323
IC:300-301

COMPONENT NAME	A PROC (AI DLY)	07/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM141	


IC340
EPF10K20TC-4
IC343
UPD42280G3E2
IC344
UPD42280G3E2
IC341
S80726ANDPT1
IC342
VS12997A
EPC1441PC8
P340
PAT/CL619-0002-0
VJS3096308
IS342
FS256_6
FROM CLKBUF
TP340 EYF6CU
TP344 EYF6CU
TP346 EYF6CU
TP348 EYF6CU
TP341 EYF6CU
TP345 EYF6CU
TP347 EYF6CU
TP349 EYF6CU
TP342 EYF6CU
TP343 EYF6CU
IPB_DATA12
FS64PB1
FSPB1
PB_FRM1
IPBD_DATA12
I_FS64PB1
I_FSPB1
I_APBFRM1
IPB_DATA34
FS64PB2
FSPB2
PB_FRM2
IPBD_DATA34
I_FS64PB2
I_FSPB2
I_APBFRM2
CLK18_3
PB_FRP
LEAP_FRM
F_END
I_FEND
FS64_7
FS_6
CNT1_PB_LRCK
CNT2_PB_LRCK
COPB_L2
CUE_MDATA
COPB_L1
REC_LEAP_INT
AV_ADL[0-7]
AV_ADRS[0-3]
AV_RD
FIFOCNT_CS
AV_WR
MONID12
MONID34
MONI_DATA
CUEMD12
CUEMD34
CUE_MIXD
IAD_DATA12
IAD_DATA34
AIN12
AIN34
ID_DATA12
ID_DATA34
DIN12
DIN34
ISCLK
ISDIN
ISSYNC
I_OPBDATA12
I_OPBDATA34
OPB_DATA12
OPB_DATA34
RC_RST_L
REC_FS
UNLOCK_EDIT_H
BLKSYNC
AFRP48
OREC_FRM
REC_FRP
FS256_32K
FS64_32K
FS_32K
MSUB_L
REC_32K_H
VERINF03
VERINF02
VERINF01
VERINF00
EETH_DATA12
EETH_DATA34
MEM_OUT
EE_SW_IN12
EE_SW_IN34
TDLY_IN12
TDLY_IN34
EE_SW_OUT12
EE_SW_OUT34
CP340
CP341
CP342
CP343
C340 0.01/UBN
C341 0.01/UBN
C342 0.01/UBN
C343 0.01/UBN
C344 0.01/UBN
C345 0.1/UBN
C346 0.1/UBN
C347 0.1/UBN
R340 1000/J6
R341 1000/J6
R342 0/J6
R343 0/J6
R344 0/J6
R345 0/J6
R346 PAT/J6
R347 PAT/J6
R348 0/J6
R349 0/J6
R350 0/J6
R351 1000/J6
R352 1000/J6
R353 1000/J6
R354 1000/J6
R355 1000/J6
R356 1000/J6
R357 0/J6
R358 PAT/J6
VCC
+3R2V
GROUND

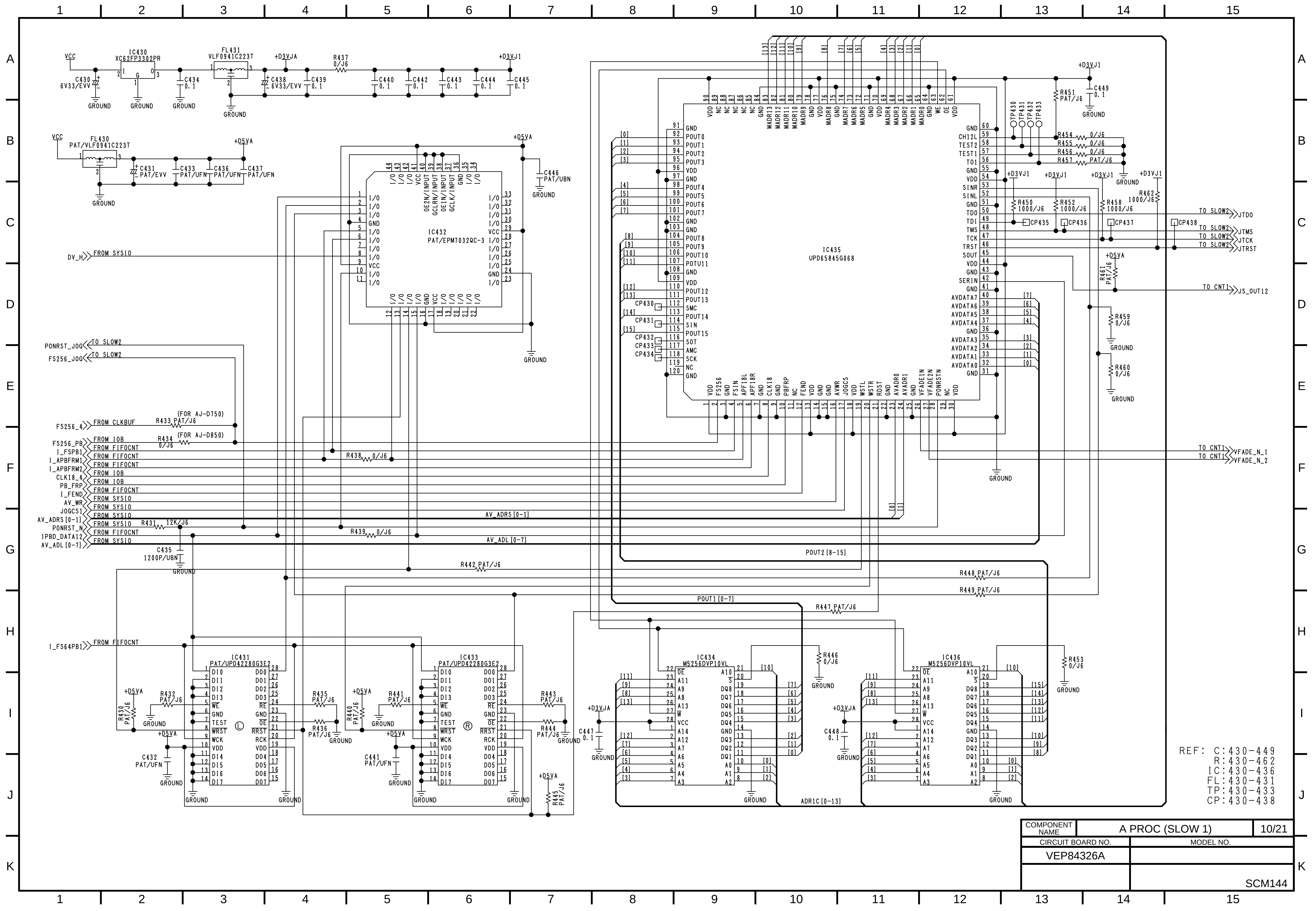
REF: C:340-347
R:340-358
P:340
IS:342
TP:340-349
IC:340-344

COMPONENT NAME	A PROC (FIFO CNT)	08/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM142	


IPB_DATA12
FS64PB1
FSPB1
PB_FRM1
FROM IOB
FROM IOB
FROM IOB
FROM IOB
R389 PAT/J6
R390 PAT/J6
R391 PAT/J6
R392 PAT/J6
IPBD_DATA12
I_FS64PB1
I_FSPB1
I_APBFRM1
TO SLOW1
TO CNT1/SLOW1
TO CNT1/SLOW1
TO CNT1/SLOW1/AMEMCON
F_END
FROM IOB
R388 PAT/J6
I_FEND
TO CNT1/CNT2/SLOW1/SLOW2
FS_J1
FROM CNT1
R386 PAT/J6
CNT1_PB_LRCK
TO CNT1
FS_6
FROM CLKBUFF
R387 PAT/J6
REC_FS
TO IOB
LINE_OUT_MONI_H
FROM SYSIO
MONID12
FROM CNT1
R380 PAT/J6
MONI_DATA
TO IOB
CUEMD12
FROM CNT1
R381 PAT/J6
CUE_MIXD
TO IOB
IAD_DATA12
FROM AIDLY
R382 PAT/J6
AIN12
TO CNT1
ID_DATA12
FROM DIF-IC/DIFCON
R383 PAT/J6
DIN12
TO CNT1
I_OPBDATA12
FROM CNT1
R384 PAT/J6
OPB_DATA12
TO IOB/DIF-IC/DIFCON
AFRP48
FROM CNT1
R385 PAT/J6
OREC_FRM
TO IOB/AMEMCON
VCC
IC380
PAT/MC74HC74AF-R
4 S
2 D
Q 5
3 C1
Q̄ 6
R 1
R393 PAT/J6
IC381
PAT/MC74HC157AFR
15 Ḡ
1 S
2 A1
3 B1
5 A2
6 B2
11 A3
10 B3
14 A4
13 B4
Y1 4
Y2 7
Y3 9
Y4 12
GROUND
VCC
R394 PAT/J6
R396 PAT/J6
R398 PAT/J6
R400 PAT/J6
R395 0/J6
R397 0/J6
R399 0/J6
R401 0/J6
GROUND
VCC
R402 PAT/J6
TO IOB
REC_LEAP_INT
TO FIFOCNT
VERINF03
TO FIFOVNT
VERINF02
TO FIFOCNT
VERINF01
TO FIFOCNT
VERINF00
VCC
C380 PAT/UBN
V 14
7 G
IC380 PAT/MC74HC74AF-R
C381 PAT/UBN
V 16
8 G
IC381 PAT/MC74HC157AFR
GROUND
VCC
IC380
PAT/MC74HC74AF-R
10 S
12 D
Q 9
11 C1
Q̄ 8
R 13
GROUND

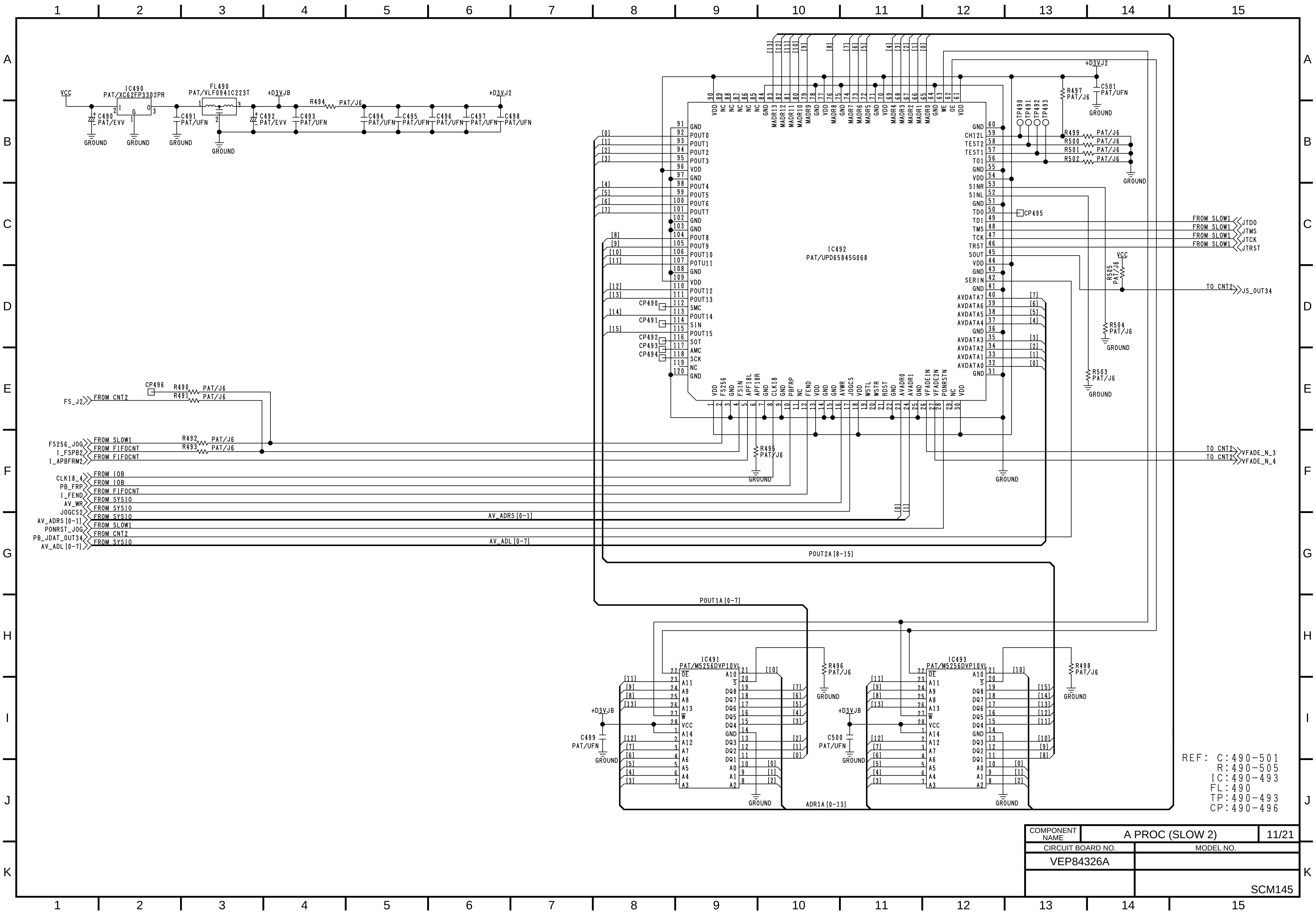
REF: C:380-381
R:380-402
IC:380-381

COMPONENT NAME	A PROC (IO CNT)	09/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM143	


IC430
XC62FP3302PR
FL431
VLF0941C223T
FL430
PAT/VLF0941C223T
VCC
+D3VJA
+D3VJ1
+D5VA
R437
0/J6
C430
6V33/EVV
C434
0.1
C438
6V33/EVV
C439
C440
C442
C443
C444
C445
C431
PAT/EVV
C433
PAT/UFN
C436
C437
C446
PAT/UBN
GROUND
IC432
PAT/EPM7032QC-3
OE2N/INPUT
GCLRN/INPUT
OE1N/INPUT
GCLK/INPUT
I/O
DV_H
FROM SYSIO
PONRST_JOG
TO SLOW2
FS256_JOG
FS256_4
FROM CLKBUF
R433 PAT/J6
(FOR AJ-D750)
R434
0/J6
(FOR AJ-D850)
FS256_PB
FROM IOB
I_FSPB1
FROM FIFOCNT
I_APBFRM1
I_APBFRM2
CLK18_4
PB_FRP
I_FEND
AV_WR
JOGCS1
AV_ADRS[0-1]
PONRST_N
IPBD_DATA12
AV_ADL[0-7]
R431
12K/J6
C435
1200P/UBN
R438
0/J6
R439
0/J6
AV_ADRS[0-1]
AV_ADL[0-7]
R442 PAT/J6
IC435
UPD65845G068
VDD
GND
NC
MADR13
MADR12
MADR11
MADR10
MADR9
MADR8
MADR7
MADR6
MADR5
MADR4
MADR3
MADR2
MADR1
MADR0
WE
OE
POUT0
POUT1
POUT2
POUT3
POUT4
POUT5
POUT6
POUT7
POUT8
POUT9
POUT10
POTU11
POUT12
POUT13
SMC
POUT14
SIN
POUT15
SOT
AMC
SCK
CP430
CP431
CP432
CP433
CP434
CH12L
TEST2
TEST1
TO1
SINR
SINL
TDO
TDI
TMS
TCK
TRST
SOUT
SERIN
AVDATA7
AVDATA6
AVDATA5
AVDATA4
AVDATA3
AVDATA2
AVDATA1
AVDATA0
FS256
FSIN
APF18L
APF18R
CLK18
PBFRP
FEND
AVWR
JOGCS
WSTL
WSTR
RDST
AVADR0
AVADR1
VFADE1N
VFADE2N
PONRSTN
TP430
TP431
TP432
TP433
R451
PAT/J6
C449
R454
0/J6
R455
R456
R457
R450
1000/J6
R452
R458
R462
1000/J6
CP435
CP436
CP437
CP438
TO SLOW2
JTDO
JTMS
JTCK
JTRST
R461
PAT/J6
TO CNT1
JS_OUT12
R459
0/J6
R460
0/J6
TO CNT1
VFADE_N_1
VFADE_N_2
POUT2[8-15]
POUT1[0-7]
R448 PAT/J6
R449 PAT/J6
R447 PAT/J6
I_FS64PB1
FROM FIFOCNT
IC431
PAT/UPD42280G3E2
IC433
PAT/UPD42280G3E2
DI0
DI1
DI2
DI3
WE
TEST
WRST
WCK
DI4
DI5
DI6
DI7
DO0
DO1
DO2
DO3
RE
OE
RRST
RCK
DO4
DO5
DO6
DO7
Ⓛ
Ⓡ
R430
PAT/J6
R432
PAT/J6
R435
PAT/J6
R436
PAT/J6
R440
PAT/J6
R441
PAT/J6
R443
PAT/J6
R444
PAT/J6
R445
PAT/J6
C432
PAT/UFN
C441
PAT/UFN
IC434
M5256DVP10VL
IC436
M5256DVP10VL
A10
A11
A9
A8
A13
A14
A12
A7
A6
A5
A4
A3
A0
A1
A2
DQ8
DQ7
DQ6
DQ5
DQ4
DQ3
DQ2
DQ1
S
W
C447
0.1
C448
0.1
R446
0/J6
R453
0/J6
ADR1C[0-13]

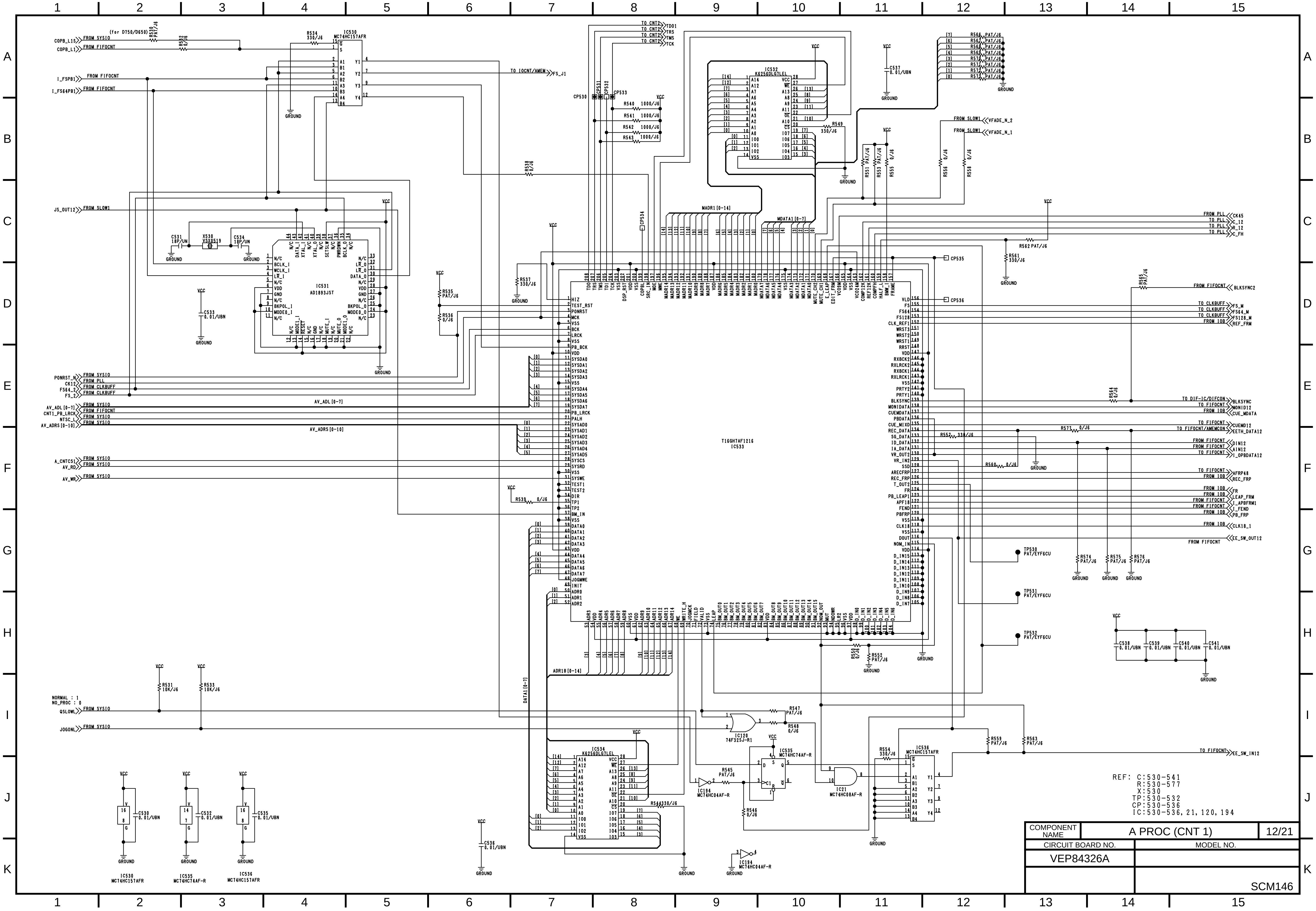
REF: C:430-449
R:430-462
IC:430-436
FL:430-431
TP:430-433
CP:430-438

COMPONENT NAME	A PROC (SLOW 1)	10/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM144	


IC490
PAT/XC62FP3302PR
FL490
PAT/VLF0941C223T
VCC
+D3VJB
+D3VJ2
R494 PAT/J6
C490 PAT/EVV
C491 PAT/UFN
C492 PAT/EVV
C493 PAT/UFN
C494 PAT/UFN
C495 PAT/UFN
C496 PAT/UFN
C497 PAT/UFN
C498 PAT/UFN
GROUND
IC492
PAT/UPD65845G068
R497 PAT/J6
C501 PAT/UFN
TP490
TP491
TP492
TP493
R499 PAT/J6
R500 PAT/J6
R501 PAT/J6
R502 PAT/J6
CP495
R505 PAT/J6
R504 PAT/J6
R503 PAT/J6
CP490
CP491
CP492
CP493
CP494
CP496
R490 PAT/J6
R491 PAT/J6
R492 PAT/J6
R493 PAT/J6
R495 PAT/J6
FS_J2 FROM CNT2
FS256_JOG FROM SLOW1
I_FSPB2 FROM FIFOCNT
I_APBFRM2 FROM FIFOCNT
CLK18_4 FROM IOB
PB_FRP FROM IOB
I_FEND FROM FIFOCNT
AV_WR FROM SYSIO
JOGCS2 FROM SYSIO
AV_ADRS[0-1] FROM SYSIO
PONRST_JOG FROM SLOW1
PB_JDAT_OUT34 FROM CNT2
AV_ADL[0-7] FROM SYSIO
AV_ADRS[0-1]
AV_ADL[0-7]
FROM SLOW1 JTDO
FROM SLOW1 JTMS
FROM SLOW1 JTCK
FROM SLOW1 JTRST
TO CNT2 JS_OUT34
TO CNT2 VFADE_N_3
TO CNT2 VFADE_N_4
POUT2A[8-15]
POUT1A[0-7]
ADR1A[0-13]
IC491
PAT/M5256DVP10VL
IC493
PAT/M5256DVP10VL
R496 PAT/J6
R498 PAT/J6
C499 PAT/UFN
C500 PAT/UFN

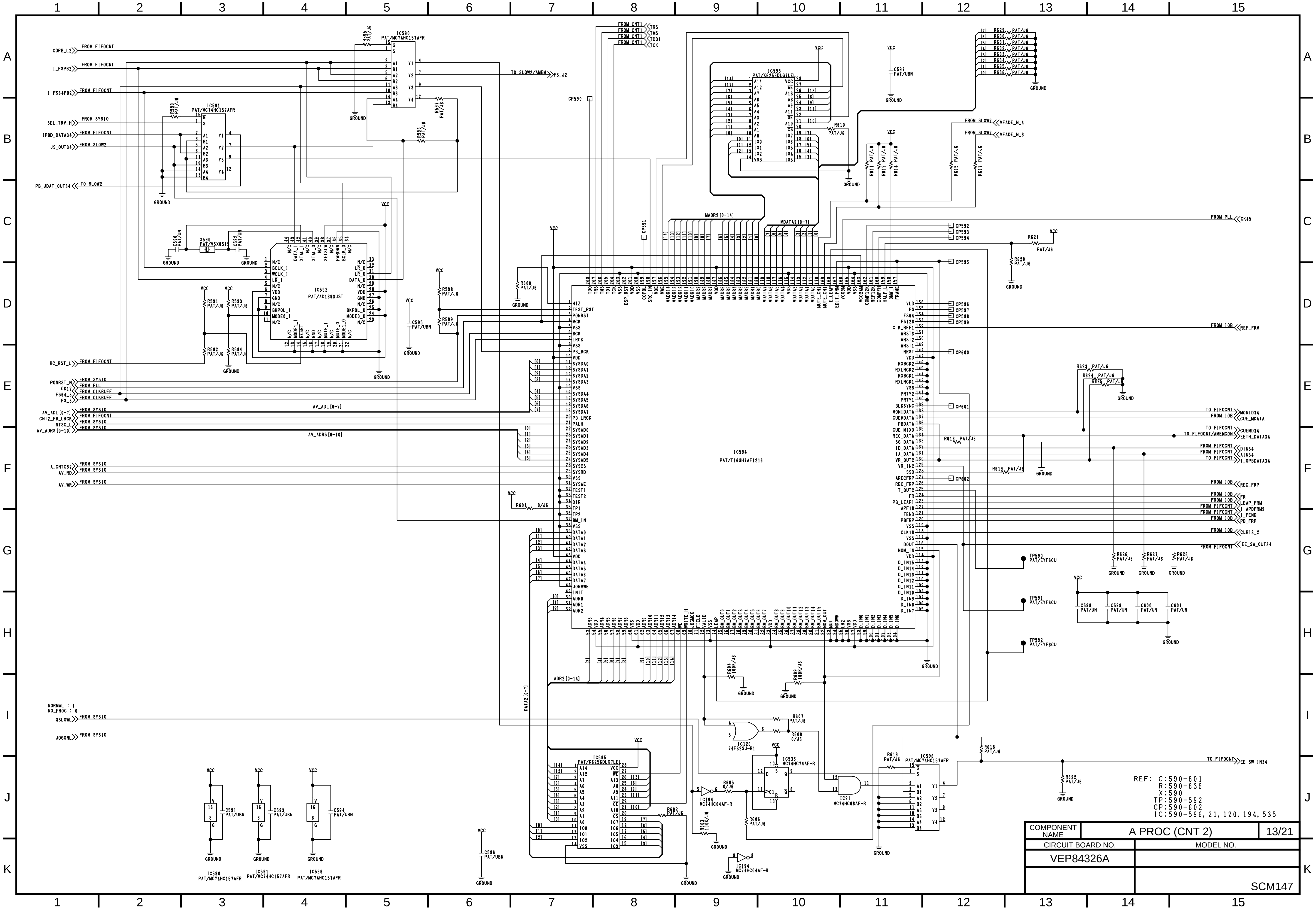
REF: C:490-501
R:490-505
IC:490-493
FL:490
TP:490-493
CP:490-496

COMPONENT NAME	A PROC (SLOW 2)	11/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM145	


IC530 MC74HC157AFR
IC531 AD1893JST
IC532 K6256DLG7LEL
IC533 T16GH7AF1216
IC534 K6256DLG7LEL
IC535 MC74HC74AF-R
IC536 MC74HC157AFR
IC120 74F32SJ-R1
IC194 MC74HC04AF-R
IC21 MC74HC08AF-R
X530 VSX0519
COPB_L1S
COPB_L1
I_FSPB1
I_FS64PB1
JS_OUT12
PONRST_N
CK12
FS64_2
FS_2
AV_ADL[0-7]
CNT1_PB_LRCK
NTSC_L
AV_ADRS[0-10]
A_CNTCS1
AV_RD
AV_WR
QSLOWL
JOGONL
NORMAL : 1
NO_PROC : 0
FROM SYSIO
FROM FIFOCNT
FROM SLOW1
FROM PLL
FROM CLKBUFF
FROM IOB
TO PLL
TO CLKBUFF
TO IOB
TO FIFOCNT
TO DIF-IC/DIFCON
TO FIFOCNT/AMEMCON
TO IOCNT/AMEM
FS_J1
TDO1
TRS
TMS
TCK
VFADE_N_2
VFADE_N_1
CK45
C_I2
R_I2
C_FH
BLKSYNC2
FS_M
FS64_M
FS128_M
REF_FRM
BLKSYNC
MONID12
CUE_MDATA
CUEMD12
ETH_DATA12
DIN12
AIN12
I_OPBDATA12
AFRP48
REC_FRP
FR
LEAP_FRM
I_APBFRM1
I_FEND
PB_FRP
CLK18_1
EE_SW_OUT12
EE_SW_IN12
MADR1[0-14]
MDATA1[0-7]
ADR1B[0-14]
DATA1[0-7]
TP530 PAT/EYF6CU
TP531 PAT/EYF6CU
TP532 PAT/EYF6CU
CP530
CP531
CP532
CP533
CP534
CP535
CP536
VCC
GROUND
(for D750/D650)

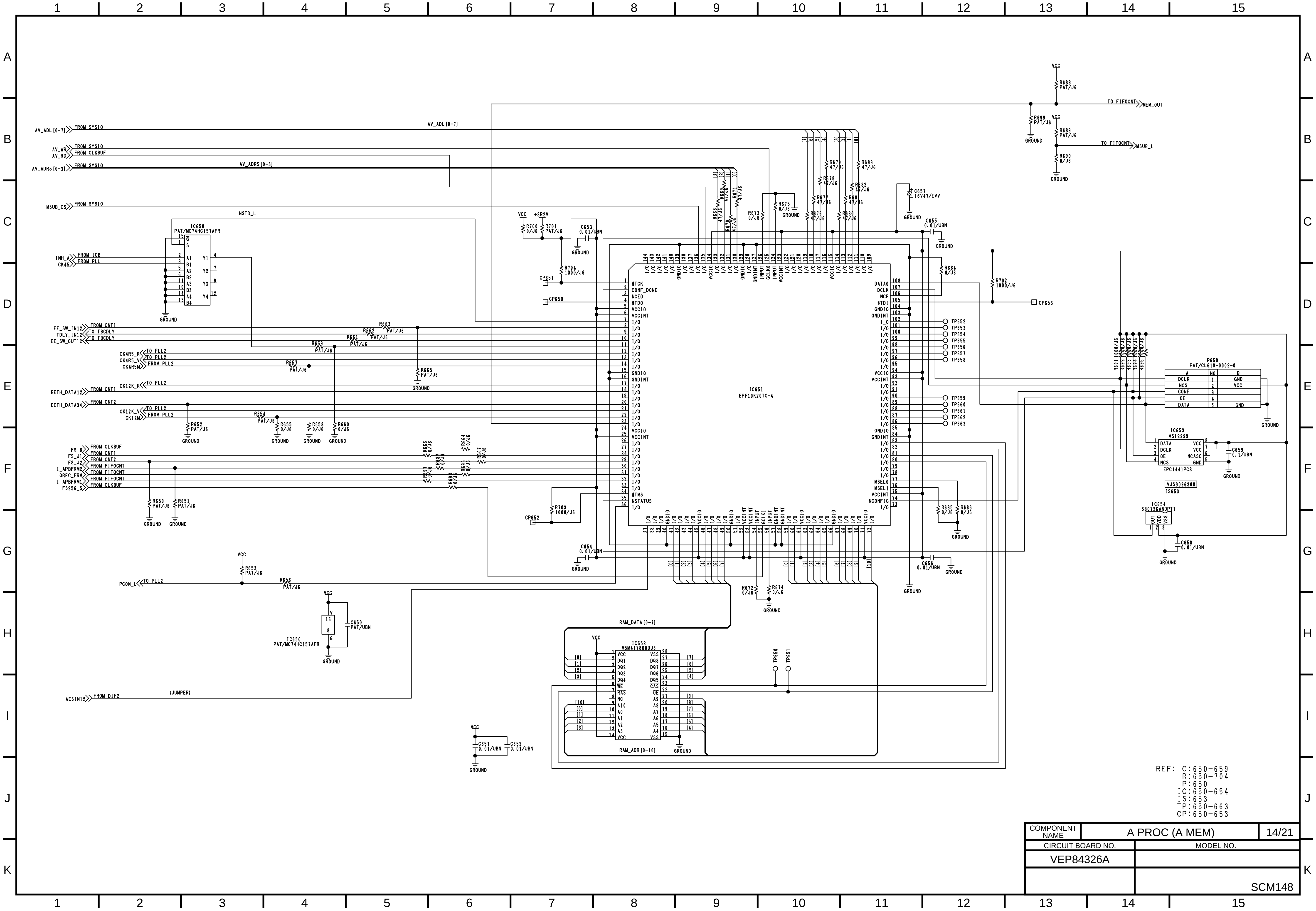
REF: C:530-541
R:530-577
X:530
TP:530-532
CP:530-536
IC:530-536, 21, 120, 194

COMPONENT NAME	A PROC (CNT 1)	12/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM146	


IC590
PAT/MC74HC157AFR
IC591
PAT/MC74HC157AFR
IC592
PAT/AD1893JST
IC593
PAT/K6256DLGTLEL
IC594
PAT/T16GH7AF1216
IC595
PAT/K6256DLGTLEL
IC596
PAT/MC74HC157AFR
IC120
74F32SJ-R1
IC535
MC74HC74AF-R
IC21
MC74HC08AF-R
IC194
MC74HC04AF-R
X590
PAT/VSX0515
COPB_L2
I_FSPB2
I_FS64PB2
SEL_TRV_H
IPBD_DATA34
JS_OUT34
PB_JDAT_OUT34
RC_RST_L
PONRST_N
CK12
FS64_3
FS_3
AV_ADL[0-7]
CNT2_PB_LRCK
NTSC_L
AV_ADRS[0-10]
A_CNTCS2
AV_RD
AV_WR
QSLOWL
JOGONL
NORMAL : 1
NO_PROC : 0
FROM FIFOCNT
FROM SYSIO
FROM SLOW2
TO SLOW2
FROM PLL
FROM CLKBUFF
FROM CNT1
TRS
TMS
TDO1
TCK
TO SLOW2/AMEM
FS_J2
FROM SLOW2
VFADE_N_4
VFADE_N_3
FROM PLL
CK45
FROM IOB
REF_FRM
TO FIFOCNT
MONID34
CUE_MDATA
CUEMD34
TO FIFOCNT/AMEMCON
EETH_DATA34
DIN34
AIN34
I_OPBDATA34
REC_FRP
FR
LEAP_FRM
I_APBFRM2
I_FEND
PB_FRP
CLK18_2
EE_SW_OUT34
EE_SW_IN34
MADR2[0-14]
MDATA2[0-7]
ADR2[0-14]
DATA2[0-7]
AV_ADL[0-7]
AV_ADRS[0-10]
TP590
TP591
TP592
PAT/EYF6CU
CP590
CP591
CP592
CP593
CP594
CP595
CP596
CP597
CP598
CP599
CP600
CP601
CP602
VCC
GROUND

REF: C:590-601
R:590-636
X:590
TP:590-592
CP:590-602
IC:590-596, 21, 120, 194, 535

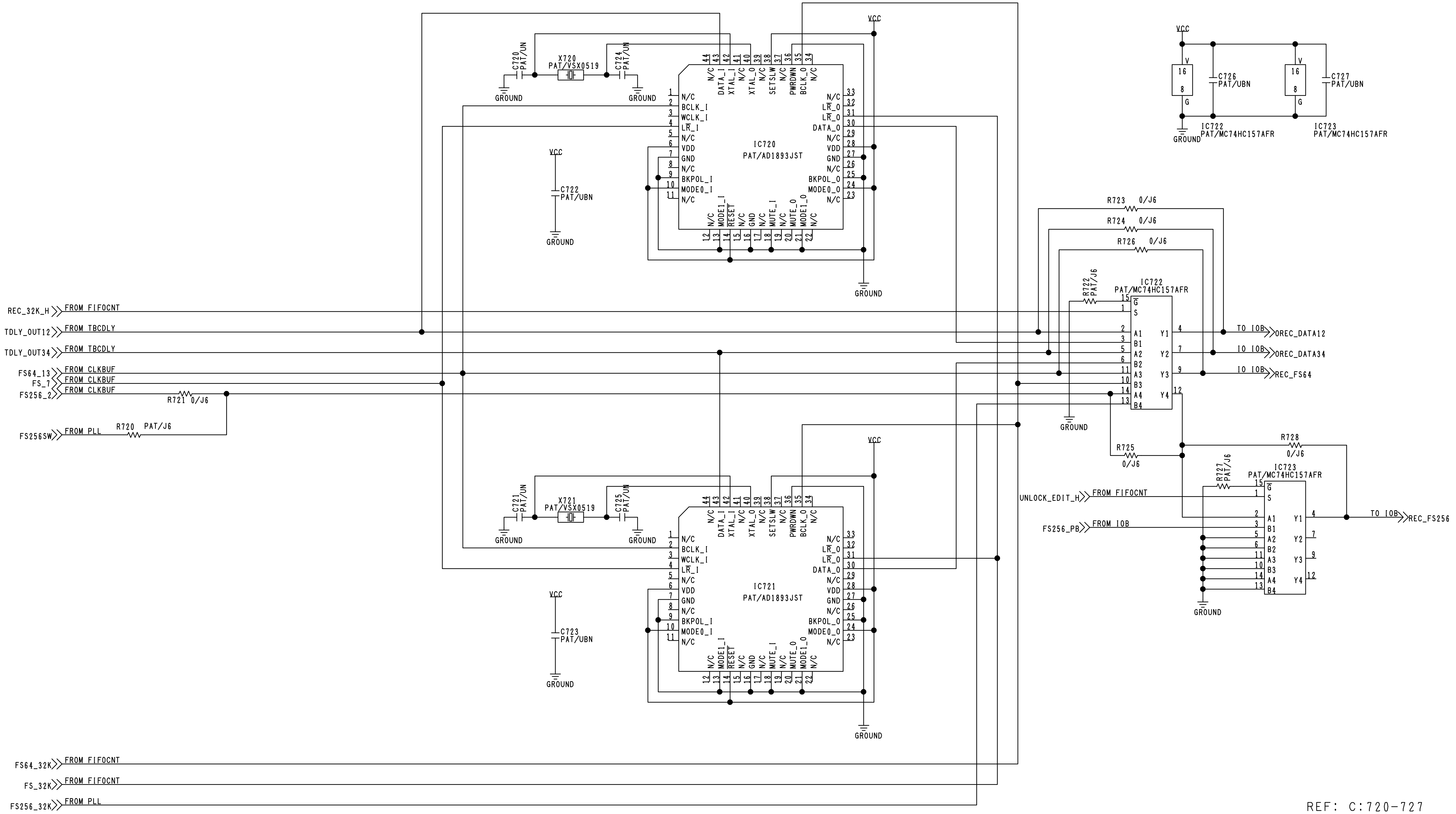
COMPONENT NAME	A PROC (CNT 2)	13/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM147	



IC651
EPF10K20TC-4
IC650
PAT/MC74HC157AFR
IC652
M5M417800DJ6
IC653
VSI2999
EPC1441PC8
IC654
S80726ANDPT1
P650
PAT/CL619-0002-0
IS653
VJS3096308
AV_ADL[0-7]
FROM SYSIO
AV_WR
AV_RD
FROM CLKBUF
AV_ADRS[0-3]
MSUB_CS
NSTD_L
INH_A
FROM IOB
CK45
FROM PLL
EE_SW_IN12
FROM CNT1
TDLY_IN12
TO TBCDLY
EE_SW_OUT12
CK4R5_R
TO PLL2
CK4R5_V
CK4R5M
FROM PLL2
EETH_DATA12
CK12K_R
EETH_DATA34
FROM CNT2
CK12K_V
CK12M
FS_8
FS_J1
FS_J2
I_APBFRM2
FROM FIFOCNT
OREC_FRM
I_APBFRM1
FS256_S
PCON_L
AESIN12
FROM DIF2
(JUMPER)
RAM_DATA[0-7]
RAM_ADR[0-10]
TO FIFOCNT
MEM_OUT
MSUB_L
VCC
+3R2V
GROUND
CP650
CP651
CP652
CP653
TP650
TP651
TP652
TP653
TP654
TP655
TP656
TP657
TP658
TP659
TP660
TP661
TP662
TP663
C650 PAT/UBN
C651 0.01/UBN
C652 0.01/UBN
C653 0.01/UBN
C654 0.01/UBN
C655 0.01/UBN
C656 0.01/UBN
C657 16V47/EVV
C658 0.01/UBN
C659 0.1/UBN
R650 PAT/J6
R651 PAT/J6
R652 PAT/J6
R653 PAT/J6
R654 PAT/J6
R655 0/J6
R656 PAT/J6
R657 PAT/J6
R658 0/J6
R659 PAT/J6
R660 0/J6
R661 PAT/J6
R662 PAT/J6
R663 PAT/J6
R665 PAT/J6
R672 0/J6
R673 0/J6
R674 0/J6
R675 0/J6
R676 47/J6
R677 47/J6
R678 47/J6
R679 47/J6
R680 47/J6
R681 47/J6
R682 47/J6
R683 47/J6
R684 0/J6
R685 0/J6
R686 0/J6
R688 PAT/J6
R689 PAT/J6
R690 0/J6
R699 PAT/J6
R700 0/J6
R701 PAT/J6
R702 1000/J6
R703 1000/J6
R704 1000/J6
DATA0
DCLK
NCE
NCEO
CONF_DONE
NSTATUS
NCONFIG
MSEL0
MSEL1
VCCIO
VCCINT
GNDIO
GNDINT
I/O

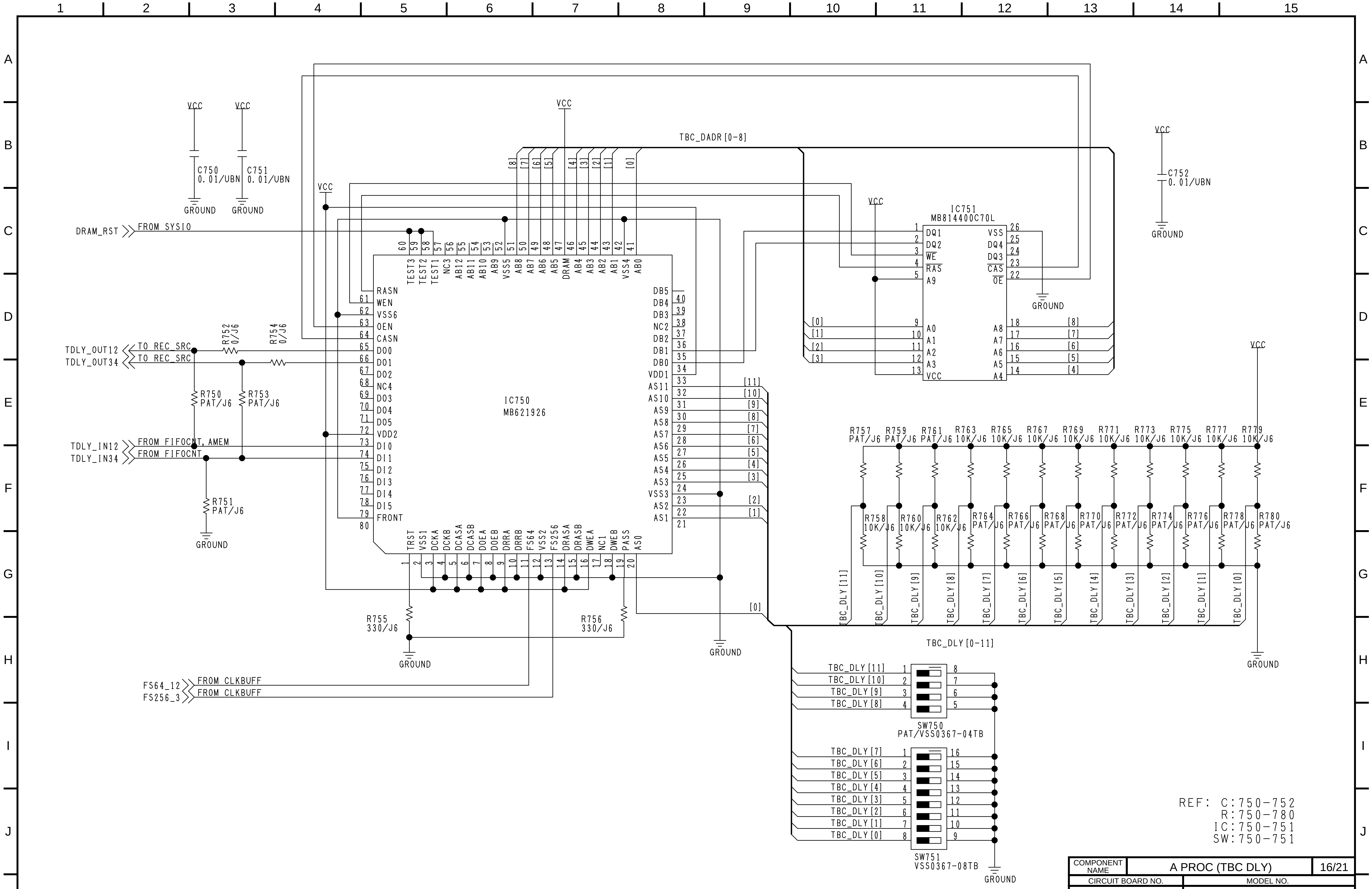
REF: C:650-659
R:650-704
P:650
IC:650-654
IS:653
TP:650-663
CP:650-653

COMPONENT NAME	A PROC (A MEM)	14/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM148	


IC720
PAT/AD1893JST
IC721
PAT/AD1893JST
IC722
PAT/MC74HC157AFR
IC723
PAT/MC74HC157AFR
X720
PAT/VSX0519
X721
PAT/VSX0519
C720
PAT/UN
C721
PAT/UN
C724
PAT/UN
C725
PAT/UN
C722
PAT/UBN
C723
PAT/UBN
C726
PAT/UBN
C727
PAT/UBN
R720 PAT/J6
R721 0/J6
R722 PAT/J6
R723 0/J6
R724 0/J6
R725 0/J6
R726 0/J6
R727 PAT/J6
R728 0/J6
VCC
GROUND
N/C
DATA_I
XTAL_I
XTAL_O
SETSLW
PWRDWN
BCLK_O
BCLK_I
WCLK_I
LR_I
VDD
GND
BKPOL_I
MODE0_I
MODE1_I
RESET
MUTE_I
MUTE_O
MODE1_O
MODE0_O
BKPOL_O
DATA_O
LR_O
G
S
A1
B1
A2
B2
A3
B3
A4
B4
Y1
Y2
Y3
Y4
V
16
8
REC_32K_H
FROM FIFOCNT
TDLY_OUT12
FROM TBCDLY
TDLY_OUT34
FROM TBCDLY
FS64_13
FROM CLKBUF
FS_7
FROM CLKBUF
FS256_2
FROM CLKBUF
FS256SW
FROM PLL
FS64_32K
FROM FIFOCNT
FS_32K
FROM FIFOCNT
FS256_32K
FROM PLL
UNLOCK_EDIT_H
FROM FIFOCNT
FS256_PB
FROM IOB
TO IOB
OREC_DATA12
TO IOB
OREC_DATA34
TO IOB
REC_FS64
TO IOB
REC_FS256

REF: C:720-727
R:720-728
X:720-721
IC:720-723

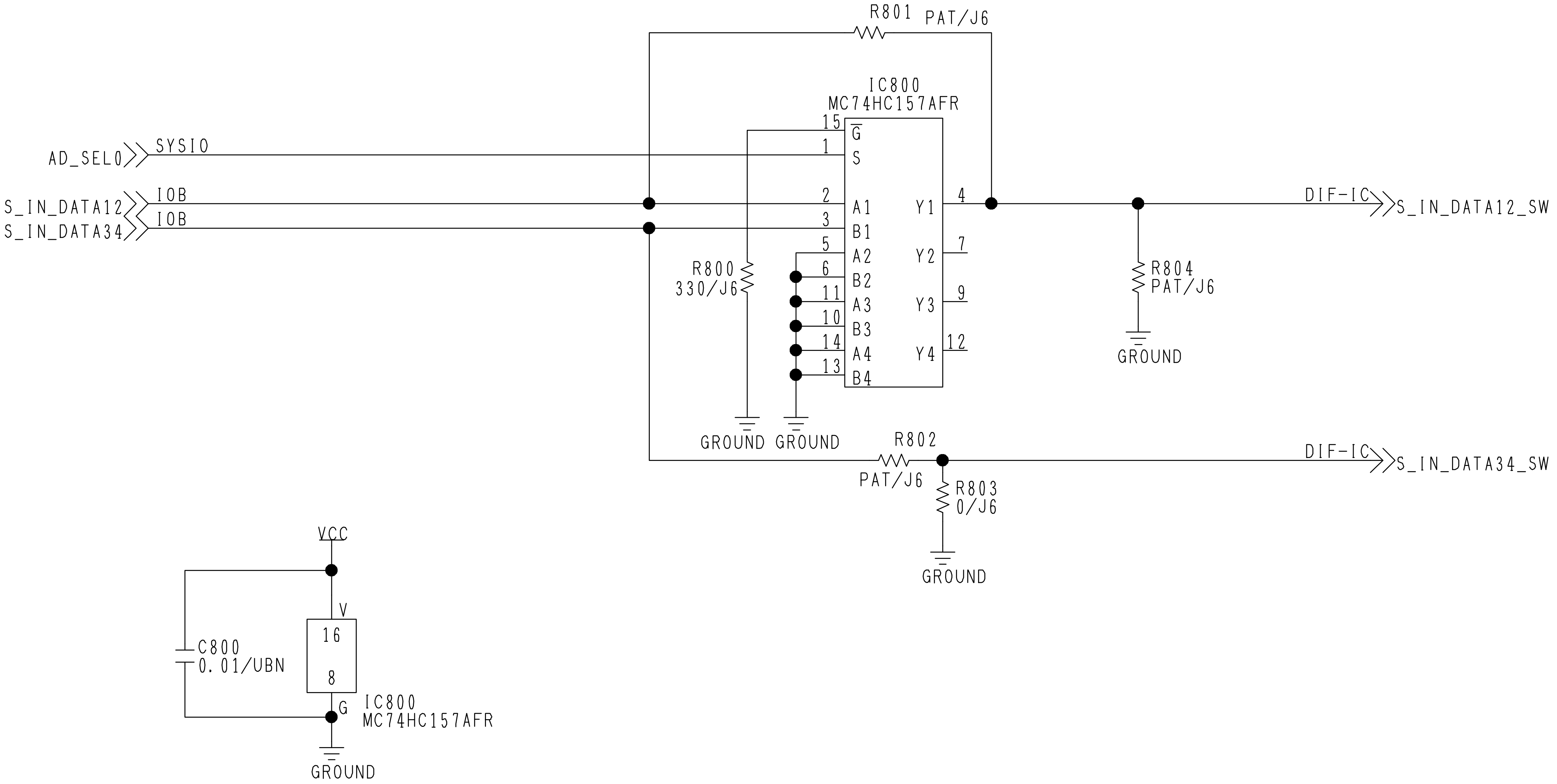
COMPONENT NAME	A PROC (REC SRC)	15/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM149	



DRAM_RST
FROM SYSIO
TDLY_OUT12
TO REC_SRC
TDLY_OUT34
TO REC_SRC
TDLY_IN12
FROM FIFOCNT, AMEM
TDLY_IN34
FROM FIFOCNT
FS64_12
FROM CLKBUFF
FS256_3
FROM CLKBUFF
C750
0.01/UBN
C751
0.01/UBN
C752
0.01/UBN
VCC
GROUND
R750
PAT/J6
R751
PAT/J6
R752
0/J6
R753
PAT/J6
R754
0/J6
R755
330/J6
R756
330/J6
IC750
MB621926
IC751
MB814400C70L
TBC_DADR[0-8]
TBC_DLY[0-11]
RASN
WEN
VSS6
OEN
CASN
DO0
DO1
DO2
NC4
DO3
DO4
DO5
VDD2
DI0
DI1
DI2
DI3
DI4
DI5
FRONT
TEST3
TEST2
TEST1
NC3
AB12
AB11
AB10
AB9
VSS5
AB8
AB7
AB6
AB5
DRAM
AB4
AB3
AB2
AB1
VSS4
AB0
DB5
DB4
DB3
NC2
DB2
DB1
DB0
VDD1
AS11
AS10
AS9
AS8
AS7
AS6
AS5
AS4
AS3
VSS3
AS2
AS1
TRST
VSS1
DCKA
DCKB
DCASA
DCASB
DOEA
DOEB
DRRA
DRRB
FS64
VSS2
FS256
DRASA
DRASB
DWEA
NC1
DWEB
PASS
AS0
DQ1
DQ2
WE
RAS
A9
A0
A1
A2
A3
VCC
VSS
DQ4
DQ3
CAS
OE
A8
A7
A6
A5
A4
R757 PAT/J6
R759 PAT/J6
R761 PAT/J6
R763 10K/J6
R765 10K/J6
R767 10K/J6
R769 10K/J6
R771 10K/J6
R773 10K/J6
R775 10K/J6
R777 10K/J6
R779 10K/J6
R758 10K/J6
R760 10K/J6
R762 10K/J6
R764 PAT/J6
R766 PAT/J6
R768 PAT/J6
R770 PAT/J6
R772 PAT/J6
R774 PAT/J6
R776 PAT/J6
R778 PAT/J6
R780 PAT/J6
TBC_DLY[11]
TBC_DLY[10]
TBC_DLY[9]
TBC_DLY[8]
TBC_DLY[7]
TBC_DLY[6]
TBC_DLY[5]
TBC_DLY[4]
TBC_DLY[3]
TBC_DLY[2]
TBC_DLY[1]
TBC_DLY[0]
SW750
PAT/VSS0367-04TB
SW751
VSS0367-08TB

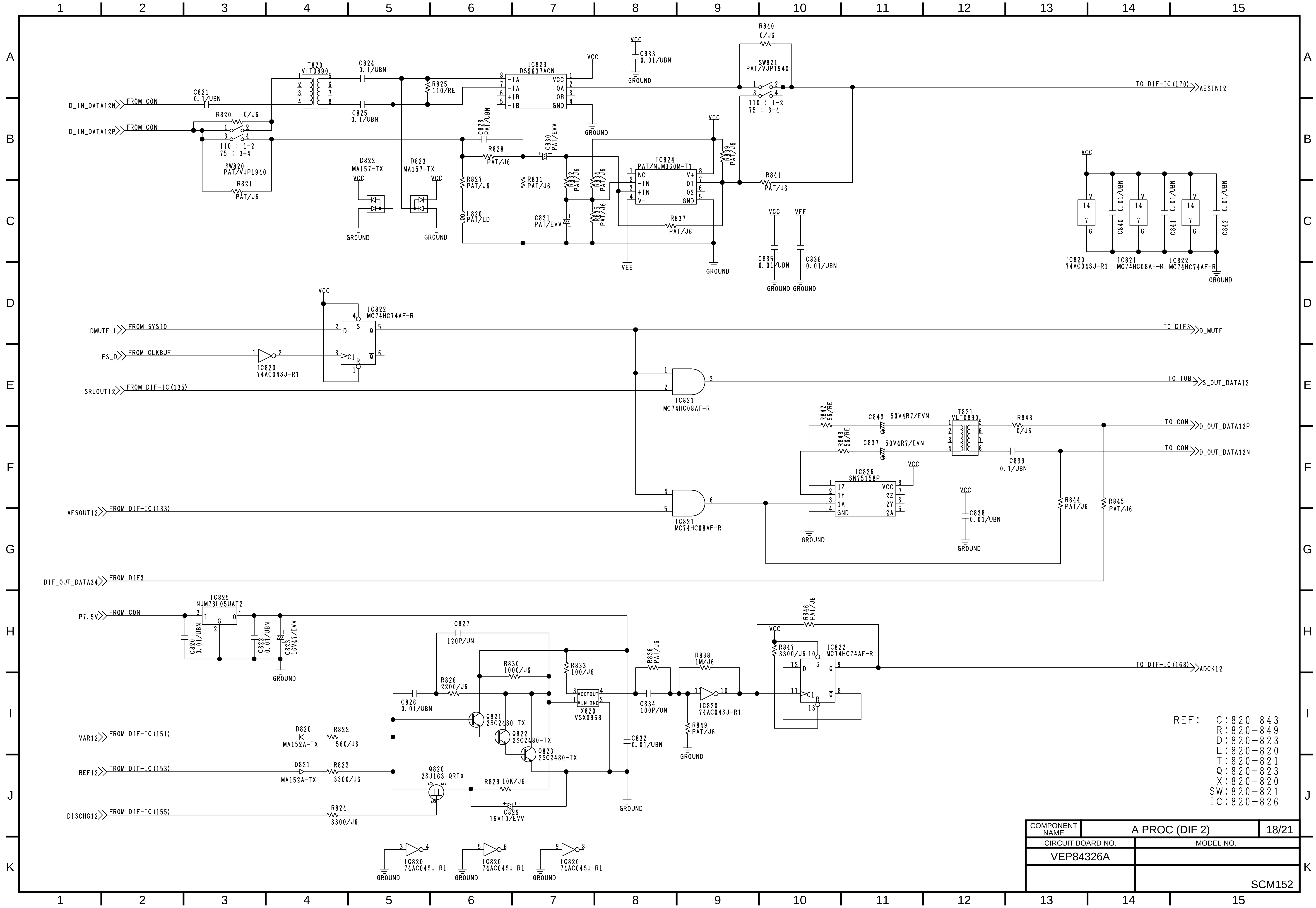
REF: C:750-752
R:750-780
IC:750-751
SW:750-751

COMPONENT NAME	A PROC (TBC DLY)	16/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM150	


R801
PAT/J6
IC800
MC74HC157AFR
15
G
1
S
AD_SEL0
SYSIO
S_IN_DATA12
IOB
S_IN_DATA34
IOB
2
A1
3
B1
5
A2
6
B2
11
A3
10
B3
14
A4
13
B4
Y1
4
Y2
7
Y3
9
Y4
12
R800
330/J6
GROUND
GROUND
DIF-IC
S_IN_DATA12_SW
R804
PAT/J6
GROUND
R802
PAT/J6
R803
0/J6
GROUND
DIF-IC
S_IN_DATA34_SW
VCC
V
16
8
G
C800
0.01/UBN
IC800
MC74HC157AFR
GROUND

REF: C:800
R:800-804
IC:800

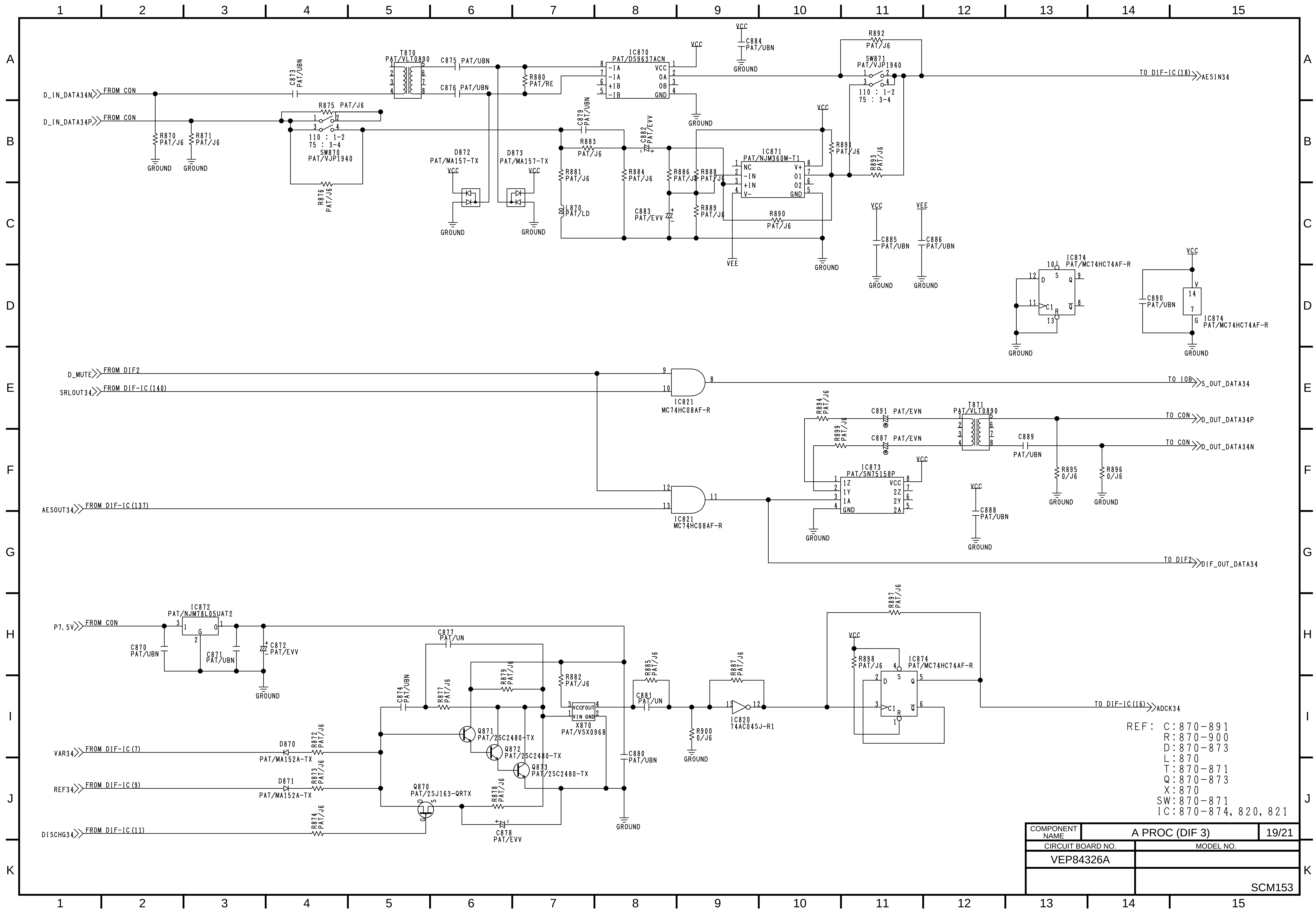
COMPONENT NAME	A PROC (DIF 1)	17/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM151	



D_IN_DATA12N FROM CON
D_IN_DATA12P FROM CON
C821 0.1/UBN
R820 0/J6
SW820 PAT/VJP1940
110 : 1-2
75 : 3-4
R821 PAT/J6
T820 VLT0890
C824 0.1/UBN
C825 0.1/UBN
R825 110/RE
IC823 DS9637ACN
-IA -IA +IB -IB VCC OA OB GND
VCC
C833 0.01/UBN
GROUND
R840 0/J6
SW821 PAT/VJP1940
TO DIF-IC(170) AESIN12
D822 MA157-TX
D823 MA157-TX
C828 PAT/UBN
R828 PAT/J6
C830 PAT/EVV
R827 PAT/J6
R831 PAT/J6
L820 PAT/LD
R832 PAT/J6
R834 PAT/J6
R835 PAT/J6
C831 PAT/EVV
IC824 PAT/NJM360M-T1
NC -IN +IN V- V+ O1 O2 GND
R837 PAT/J6
R839 PAT/J6
R841 PAT/J6
VEE
C835 0.01/UBN
C836 0.01/UBN
C840 0.01/UBN
C841 0.01/UBN
C842 0.01/UBN
IC820 74AC04SJ-R1
IC821 MC74HC08AF-R
IC822 MC74HC74AF-R
DMUTE_L FROM SYS10
FS_D FROM CLKBUF
TO DIF3 D_MUTE
SRLOUT12 FROM DIF-IC(135)
TO IOB S_OUT_DATA12
R842 56/RE
R848 56/RE
C843 50V4R7/EVN
C837 50V4R7/EVN
T821 VLT0890
R843 0/J6
TO CON D_OUT_DATA12P
TO CON D_OUT_DATA12N
C839 0.1/UBN
IC826 SN75158P
1Z 1Y 1A GND VCC 2Z 2Y 2A
C838 0.01/UBN
R844 PAT/J6
R845 PAT/J6
AESOUT12 FROM DIF-IC(133)
DIF_OUT_DATA34 FROM DIF3
P7.5V FROM CON
IC825 NJM78L05UAT2
C820 0.01/UBN
C822 0.01/UBN
C823 16V47/EVV
C827 120P/UN
R830 1000/J6
R833 100/J6
R826 2200/J6
C826 0.01/UBN
Q821 2SC2480-TX
Q822 2SC2480-TX
Q823 2SC2480-TX
X820 VSX0968
C832 0.01/UBN
VAR12 FROM DIF-IC(151)
D820 MA152A-TX
R822 560/J6
REF12 FROM DIF-IC(153)
D821 MA152A-TX
R823 3300/J6
Q820 2SJ163-QRTX
R829 10K/J6
C829 16V10/EVV
DISCHG12 FROM DIF-IC(155)
R824 3300/J6
R836 PAT/J6
C834 100P/UN
R838 1M/J6
R849 PAT/J6
R846 PAT/J6
R847 3300/J6
TO DIF-IC(168) ADCK12

REF: C:820-843
R:820-849
D:820-823
L:820-820
T:820-821
Q:820-823
X:820-820
SW:820-821
IC:820-826

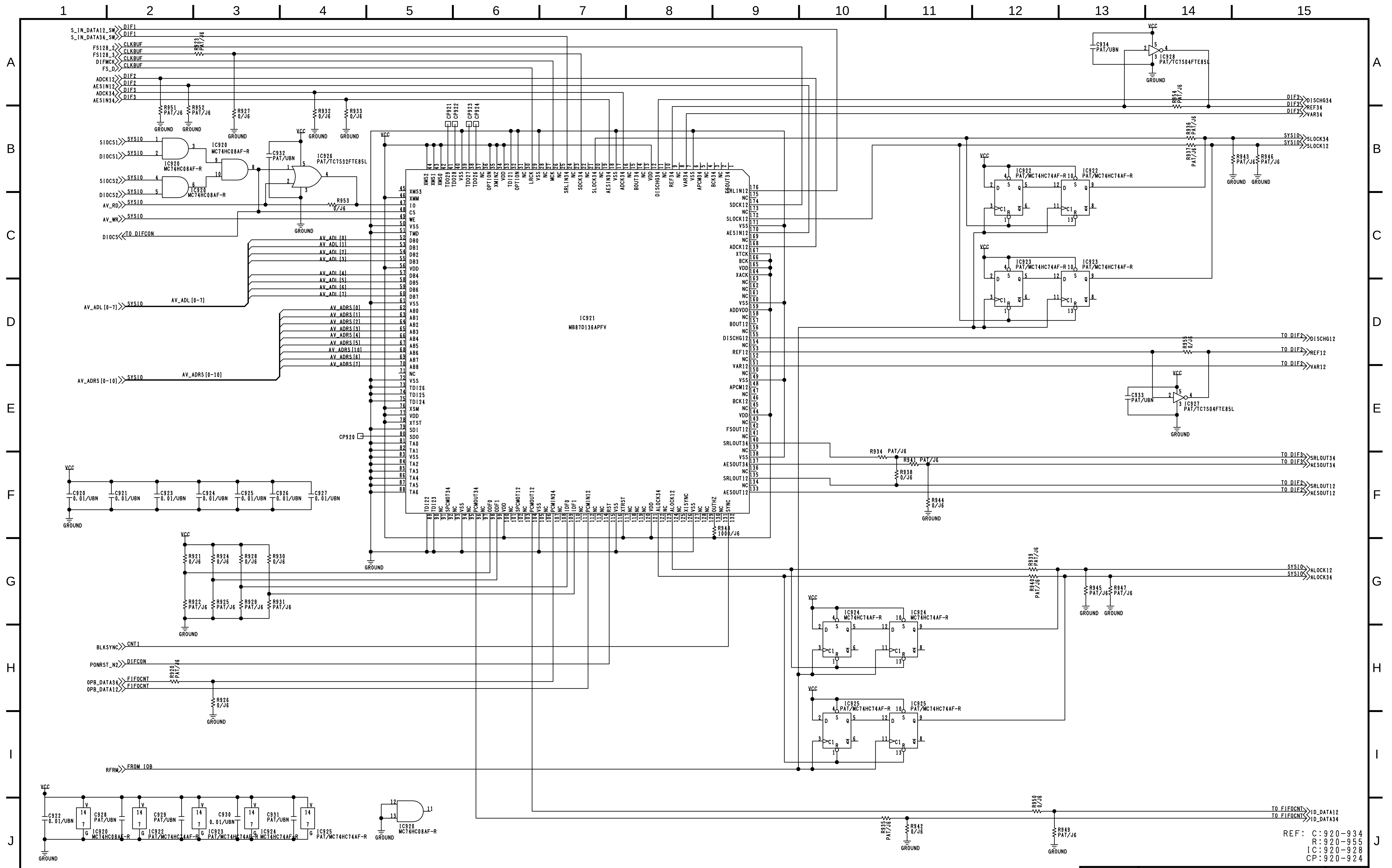
COMPONENT NAME	A PROC (DIF 2)	18/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM152	



D_IN_DATA34N FROM CON
D_IN_DATA34P FROM CON
C873 PAT/UBN
R875 PAT/J6
R870 PAT/J6
R871 PAT/J6
110 : 1-2
75 : 3-4
SW870 PAT/VJP1940
R876 PAT/J6
GROUND
T870 PAT/VLT0890
C875 PAT/UBN
C876 PAT/UBN
R880 PAT/RE
D872 PAT/MA157-TX
D873 PAT/MA157-TX
VCC
IC870 PAT/DS9637ACN
-IA
+IA
+IB
-IB
VCC
OA
OB
GND
C884 PAT/UBN
C879 PAT/UBN
R883 PAT/J6
C882 PAT/EVV
R881 PAT/J6
L870 PAT/LD
R884 PAT/J6
C883 PAT/EVV
R886 PAT/J6
R888 PAT/J6
R889 PAT/J6
IC871 PAT/NJM360M-T1
NC
-IN
+IN
V-
V+
O1
O2
GND
R890 PAT/J6
R891 PAT/J6
VEE
R892 PAT/J6
SW871 PAT/VJP1940
110 : 1-2
75 : 3-4
R893 PAT/J6
TO DIF-IC(18) AESIN34
C885 PAT/UBN
C886 PAT/UBN
IC874 PAT/MC74HC74AF-R
C890 PAT/UBN
D_MUTE FROM DIF2
SRLOUT34 FROM DIF-IC(140)
IC821 MC74HC08AF-R
TO IOB S_OUT_DATA34
R894 PAT/J6
R899 PAT/J6
C891 PAT/EVN
C887 PAT/EVN
T871 PAT/VLT0890
C889 PAT/UBN
TO CON D_OUT_DATA34P
TO CON D_OUT_DATA34N
IC873 PAT/SN75158P
1Z
1Y
1A
GND
VCC
2Z
2Y
2A
R895 0/J6
R896 0/J6
C888 PAT/UBN
AESOUT34 FROM DIF-IC(137)
TO DIF2 DIF_OUT_DATA34
P7.5V FROM CON
IC872 PAT/NJM78L05UAT2
C870 PAT/UBN
C871 PAT/UBN
C872 PAT/EVV
C877 PAT/UN
C874 PAT/UBN
R877 PAT/J6
R879 PAT/J6
R882 PAT/J6
X870 PAT/VSX0968
VCC FOUT
VIN GND
R885 PAT/J6
C881 PAT/UN
R887 PAT/J6
IC820 74AC04SJ-R1
R900 0/J6
R897 PAT/J6
R898 PAT/J6
TO DIF-IC(16) ADCK34
Q871 PAT/2SC2480-TX
Q872 PAT/2SC2480-TX
Q873 PAT/2SC2480-TX
C880 PAT/UBN
VAR34 FROM DIF-IC(7)
D870 PAT/MA152A-TX
R872 PAT/J6
REF34 FROM DIF-IC(9)
D871 PAT/MA152A-TX
R873 PAT/J6
Q870 PAT/2SJ163-QRTX
R878 PAT/J6
C878 PAT/EVV
DISCHG34 FROM DIF-IC(11)
R874 PAT/J6
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

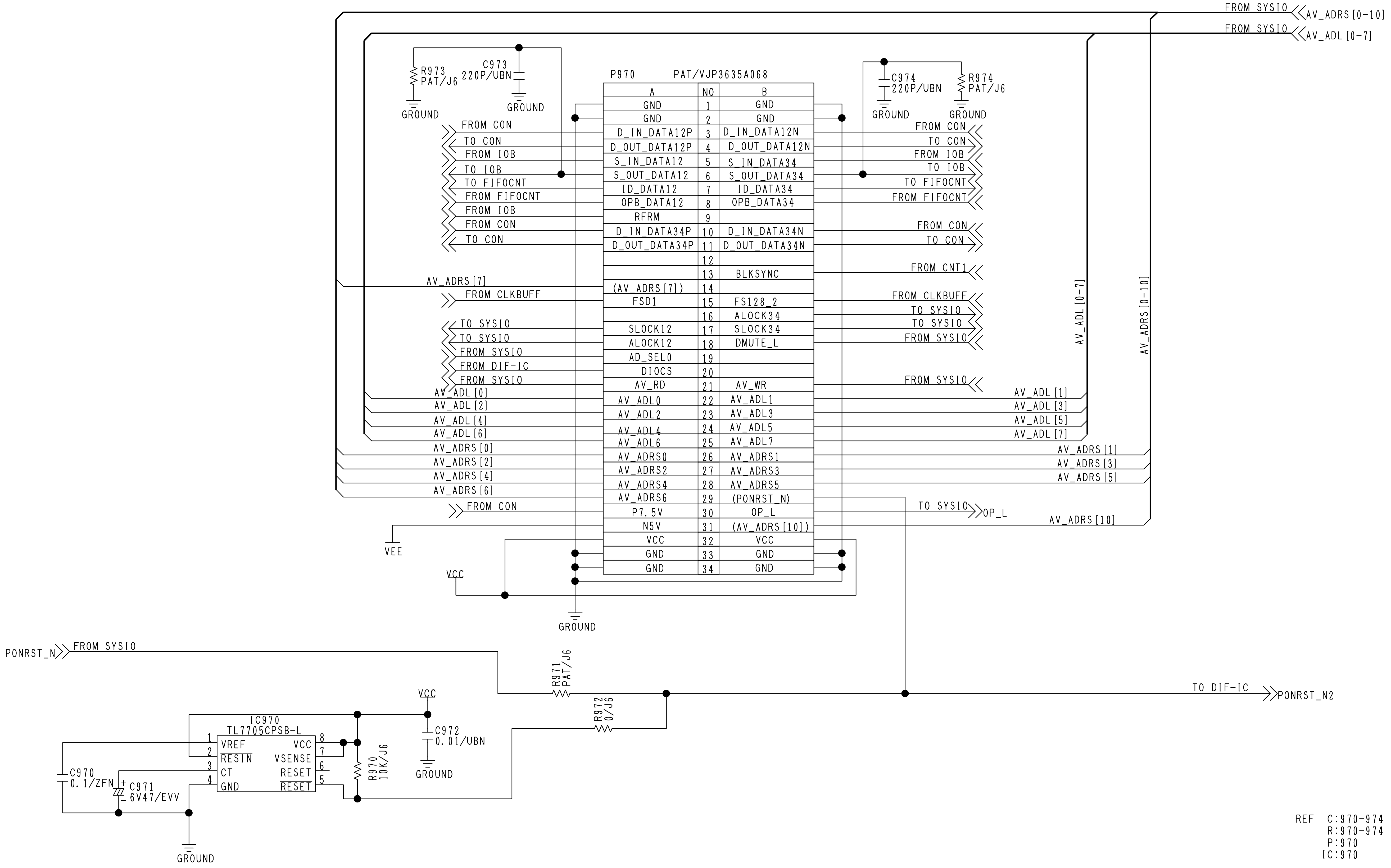
REF: C:870-891
R:870-900
D:870-873
L:870
T:870-871
Q:870-873
X:870
SW:870-871
IC:870-874, 820, 821

COMPONENT NAME	A PROC (DIF 3)	19/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM153	


S_IN_DATA12_SW
S_IN_DATA34_SW
FS128_2
FS128_3
DIFMCK
FS_D
ADCK12
AESIN12
ADCK34
AESIN34
DIF1
CLKBUF
DIF2
DIF3
R923 PAT/J6
R951 PAT/J6
R952 PAT/J6
R927 0/J6
R932 0/J6
R933 0/J6
GROUND
VCC
SIOCS1
DIOCS1
SIOCS2
DIOCS2
AV_RD
AV_WR
DIOCS
SYS10
TO DIFCON
IC920 MC74HC08AF-R
C932 PAT/UBN
IC926 PAT/TC7S32FTE85L
R953 0/J6
AV_ADL[0-7]
AV_ADRS[0-10]
CP921
CP922
CP923
CP924
CP920
IC921 MB87D136APFV
C920 0.01/UBN
C921 0.01/UBN
C923 0.01/UBN
C924 0.01/UBN
C925 0.01/UBN
C926 0.01/UBN
C927 0.01/UBN
R921 0/J6
R924 0/J6
R928 0/J6
R930 0/J6
R922 PAT/J6
R925 PAT/J6
R929 PAT/J6
R931 PAT/J6
BLKSYNC
CNT1
PONRST_N2
DIFCON
OPB_DATA34
OPB_DATA12
FIFOCNT
R920 PAT/J6
R926 0/J6
RFRM
FROM IOB
C922 0.01/UBN
C928 PAT/UBN
C929 PAT/UBN
C930 0.01/UBN
C931 PAT/UBN
IC922 PAT/MC74HC74AF-R
IC923 PAT/MC74HC74AF-R
IC924 MC74HC74AF-R
IC925 PAT/MC74HC74AF-R
C934 PAT/UBN
IC928 PAT/TC7S04FTE85L
R954 PAT/J6
DISCHG34
REF34
VAR34
R936 PAT/J6
R937 PAT/J6
SLOCK34
SLOCK12
R943 PAT/J6
R946 PAT/J6
TO DIF2
DISCHG12
REF12
VAR12
R955 0/J6
C933 PAT/UBN
IC927 PAT/TC7S04FTE85L
R934 PAT/J6
R941 PAT/J6
R938 0/J6
R944 0/J6
SRLOUT34
AESOUT34
SRLOUT12
AESOUT12
R948 100K/J6
R939 PAT/J6
R940 PAT/J6
R945 PAT/J6
R947 PAT/J6
ALOCK12
ALOCK34
R950 0/J6
R935 PAT/J6
R942 0/J6
R949 PAT/J6
TO FIFOCNT
ID_DATA12
ID_DATA34

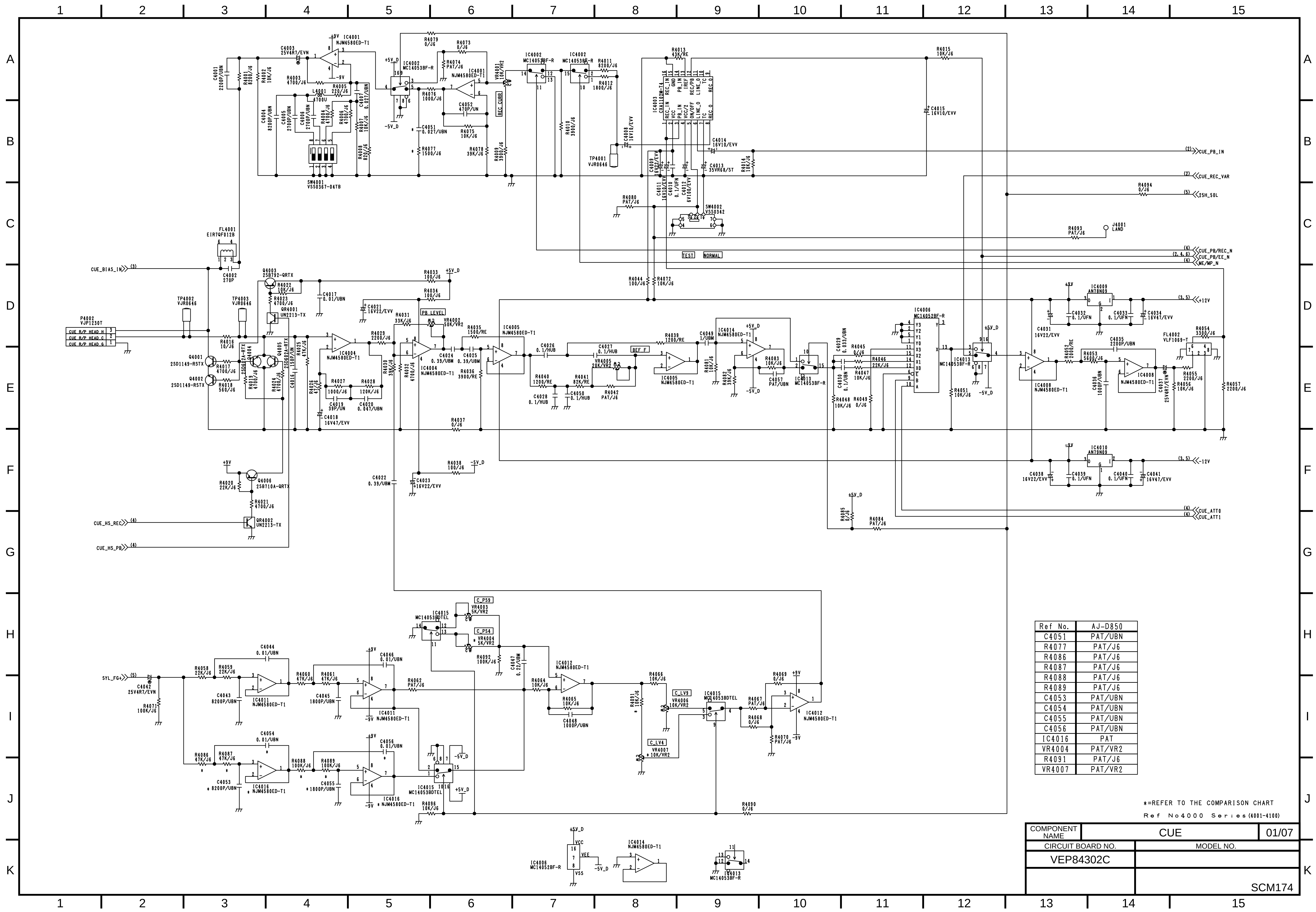
REF: C:920-934
R:920-955
IC:920-928
CP:920-924

COMPONENT NAME	A PROC (DIF-IC)	20/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM154	


FROM SYSIO
AV_ADRS[0-10]
FROM SYSIO
AV_ADL[0-7]
R973
PAT/J6
C973
220P/UBN
GROUND
GROUND
P970
PAT/VJP3635A068
A
NO
B
GND 1 GND
GND 2 GND
D_IN_DATA12P 3 D_IN_DATA12N
D_OUT_DATA12P 4 D_OUT_DATA12N
S_IN_DATA12 5 S_IN_DATA34
S_OUT_DATA12 6 S_OUT_DATA34
ID_DATA12 7 ID_DATA34
OPB_DATA12 8 OPB_DATA34
RFRM 9
D_IN_DATA34P 10 D_IN_DATA34N
D_OUT_DATA34P 11 D_OUT_DATA34N
12
13 BLKSYNC
(AV_ADRS[7]) 14
FSD1 15 FS128_2
16 ALOCK34
SLOCK12 17 SLOCK34
ALOCK12 18 DMUTE_L
AD_SEL0 19
DIOCS 20
AV_RD 21 AV_WR
AV_ADL0 22 AV_ADL1
AV_ADL2 23 AV_ADL3
AV_ADL4 24 AV_ADL5
AV_ADL6 25 AV_ADL7
AV_ADRS0 26 AV_ADRS1
AV_ADRS2 27 AV_ADRS3
AV_ADRS4 28 AV_ADRS5
AV_ADRS6 29 (PONRST_N)
P7.5V 30 OP_L
N5V 31 (AV_ADRS[10])
VCC 32 VCC
GND 33 GND
GND 34 GND
C974
220P/UBN
R974
PAT/J6
GROUND
GROUND
FROM CON
TO CON
FROM IOB
TO IOB
TO FIFOCNT
FROM FIFOCNT
FROM IOB
FROM CON
TO CON
AV_ADRS[7]
FROM CLKBUFF
TO SYSIO
TO SYSIO
FROM SYSIO
FROM DIF-IC
FROM SYSIO
AV_ADL[0]
AV_ADL[2]
AV_ADL[4]
AV_ADL[6]
AV_ADRS[0]
AV_ADRS[2]
AV_ADRS[4]
AV_ADRS[6]
FROM CON
VEE
VCC
GROUND
FROM CON
TO CON
FROM IOB
TO IOB
TO FIFOCNT
FROM FIFOCNT
FROM CON
TO CON
FROM CNT1
FROM CLKBUFF
TO SYSIO
TO SYSIO
FROM SYSIO
FROM SYSIO
AV_ADL[0-7]
AV_ADRS[0-10]
AV_ADL[1]
AV_ADL[3]
AV_ADL[5]
AV_ADL[7]
AV_ADRS[1]
AV_ADRS[3]
AV_ADRS[5]
TO SYSIO
OP_L
AV_ADRS[10]
PONRST_N
FROM SYSIO
R971
PAT/J6
R972
0/J6
TO DIF-IC
PONRST_N2
VCC
IC970
TL7705CPSB-L
1 VREF
2 RESIN
3 CT
4 GND
8 VCC
7 VSENSE
6 RESET
5 RESET
R970
10K/J6
C972
0.01/UBN
GROUND
C970
0.1/ZFN
C971
6V47/EVV
GROUND

REF C:970-974
R:970-974
P:970
IC:970

COMPONENT NAME	A PROC (DIF CON)	21/21
CIRCUIT BOARD NO.	MODEL NO.	
VEP84326A		
	SCM155	

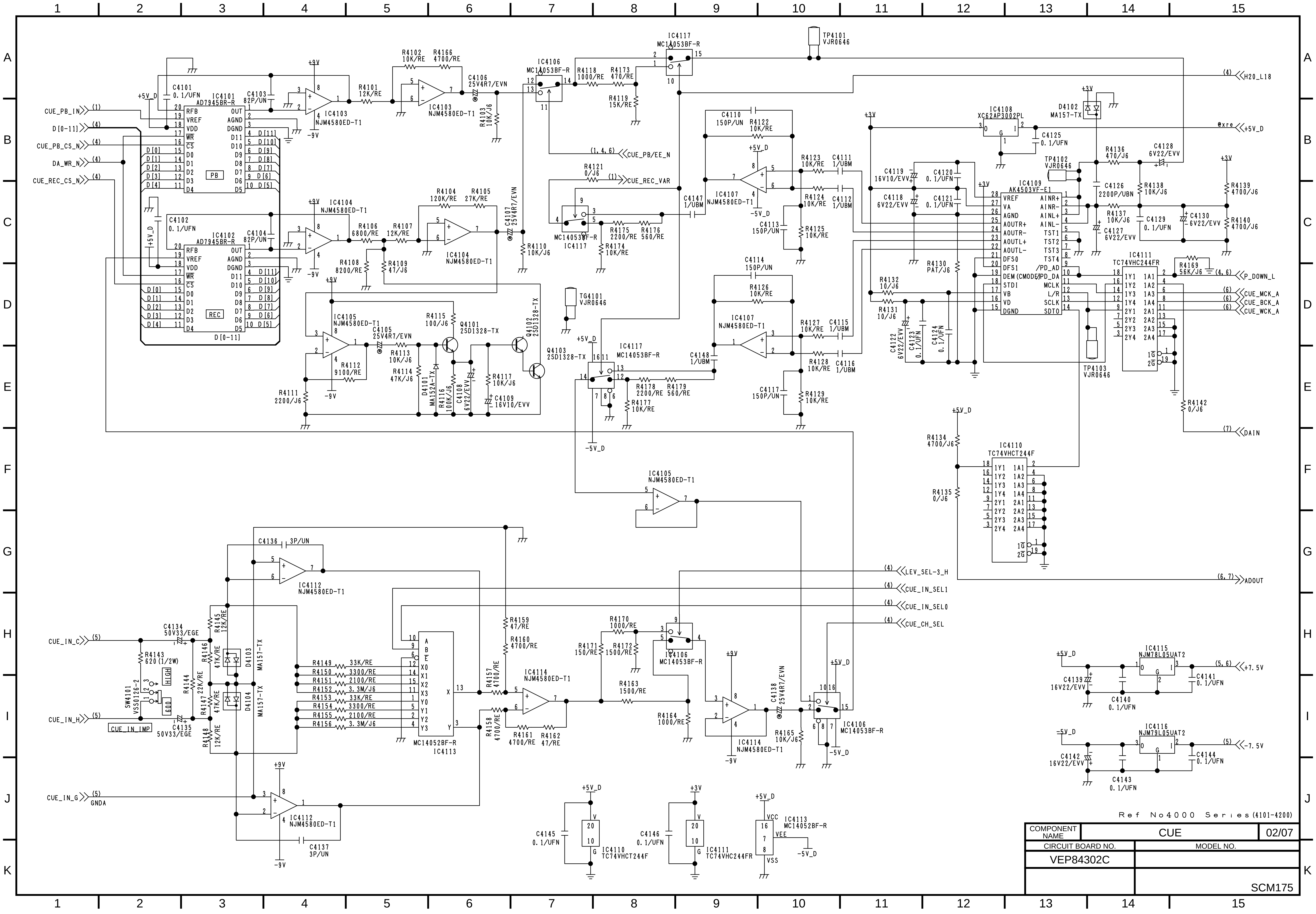

CUE_BIAS_IN
CUE R/P HEAD H
CUE R/P HEAD C
CUE R/P HEAD G
P4002 VJP1230T
CUE_HS_REC
CUE_HS_PB
SYL_FG+
CUE_PB_IN
CUE_REC_VAR
25H_50L
LAND
CUE_PB/REC_N
CUE_PB/EE_N
ME/MP_N
+12V
-12V
CUE_ATT0
CUE_ATT1
IC4001 NJM4580ED-T1
IC4002 MC14053BF-R
IC4003 CXA1102M-T4
IC4004 NJM4580ED-T1
IC4005 NJM4580ED-T1
IC4006 MC14052BF-R
IC4008 NJM4580ED-T1
IC4009 AN78N09
IC4010 AN79N09
IC4011 NJM4580ED-T1
IC4012 NJM4580ED-T1
IC4013 MC14053BF-R
IC4014 NJM4580ED-T1
IC4015 MC14053BDTEL
IC4016 NJM4580ED-T1
SW4001 VSS0367-04TB
SW4002 VSS0342
FL4001 EIR7QF012B
FL4002 VLF1069-T
REC CURR
PB LEVEL
REF F
C_PS9
C_PS4
C_LV9
C_LV4
TEST
NORMAL

Ref No.	AJ-D850
C4051	PAT/UBN
R4077	PAT/J6
R4086	PAT/J6
R4087	PAT/J6
R4088	PAT/J6
R4089	PAT/J6
C4053	PAT/UBN
C4054	PAT/UBN
C4055	PAT/UBN
C4056	PAT/UBN
IC4016	PAT
VR4004	PAT/VR2
R4091	PAT/J6
VR4007	PAT/VR2

*=REFER TO THE COMPARISON CHART

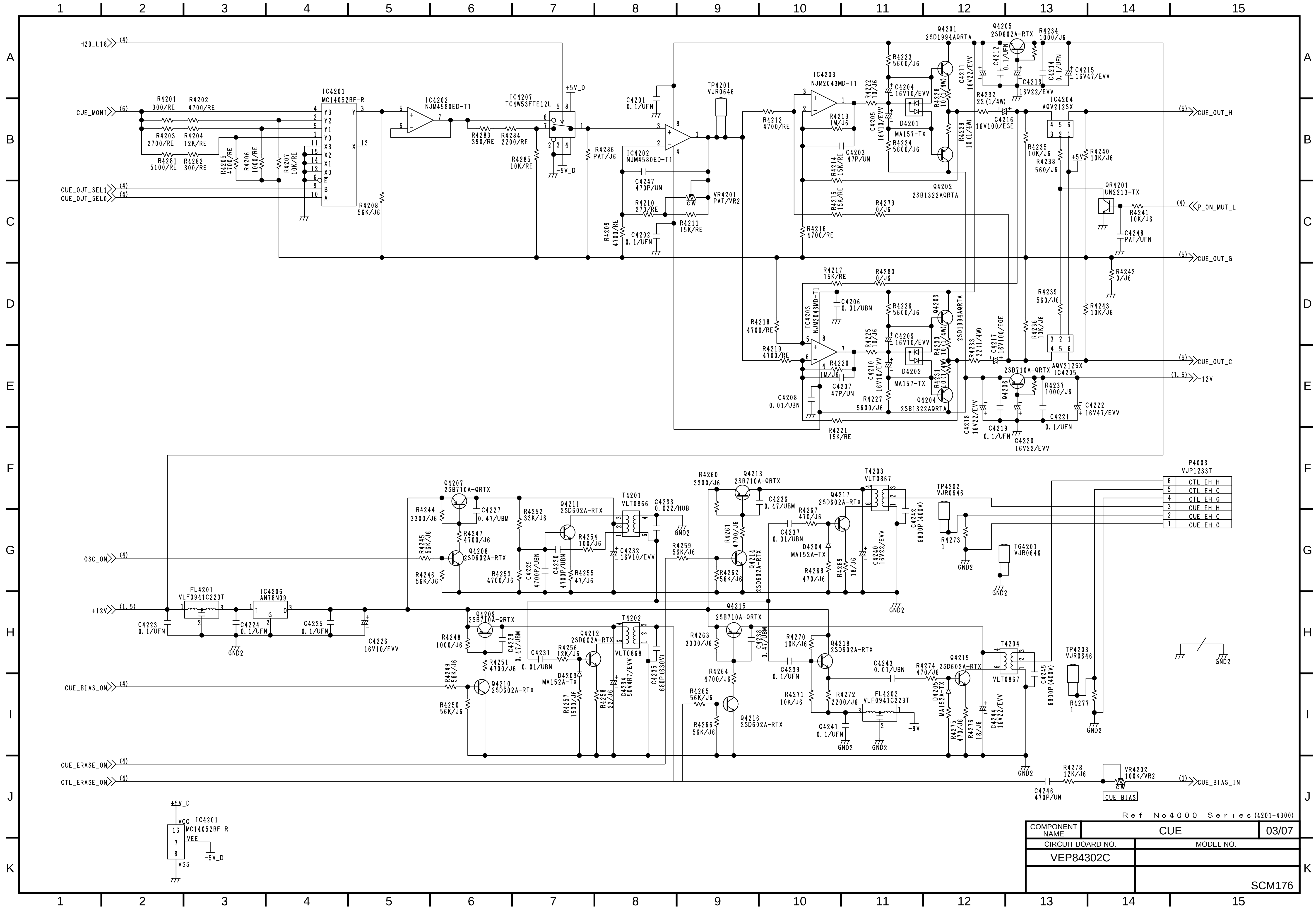
Ref No4000 Series(4001-4100)

COMPONENT NAME	CUE	01/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP84302C		
	SCM174	


CUE_PB_IN
D[0-11]
CUE_PB_CS_N
DA_WR_N
CUE_REC_CS_N
CUE_IN_C
CUE_IN_H
CUE_IN_G
GNDA
CUE_IN_IMP
IC4101 AD7945BR-R
IC4102 AD7945BR-R
PB
REC
IC4103 NJM4580ED-T1
IC4104 NJM4580ED-T1
IC4105 NJM4580ED-T1
IC4106 MC14053BF-R
IC4107 NJM4580ED-T1
IC4108 XC62AP3002PL
IC4109 AK4503VF-E1
IC4110 TC74VHCT244F
IC4111 TC74VHC244FR
IC4112 NJM4580ED-T1
IC4113 MC14052BF-R
IC4114 NJM4580ED-T1
IC4115 NJM78L05UAT2
IC4116 NJM79L05UAT2
IC4117 MC14053BF-R
Q4101 2SD1328-TX
Q4102 2SD1328-TX
Q4103 2SD1328-TX
D4101 MA152A-TX
D4102 MA157-TX
D4103 MA157-TX
D4104 MA157-TX
SW4101 VSS0126-2
HIGH
600
TP4101 VJR0646
TP4102 VJR0646
TP4103 VJR0646
TG4101 VJR0646
CUE_PB/EE_N
CUE_REC_VAR
H2O_L18
@xre
+5V_D
P_DOWN_L
CUE_MCK_A
CUE_BCK_A
CUE_WCK_A
DAIN
ADOUT
LEV_SEL-3_H
CUE_IN_SEL1
CUE_IN_SEL0
CUE_CH_SEL
+7.5V
-7.5V
+9V
-9V
+3V
-5V_D

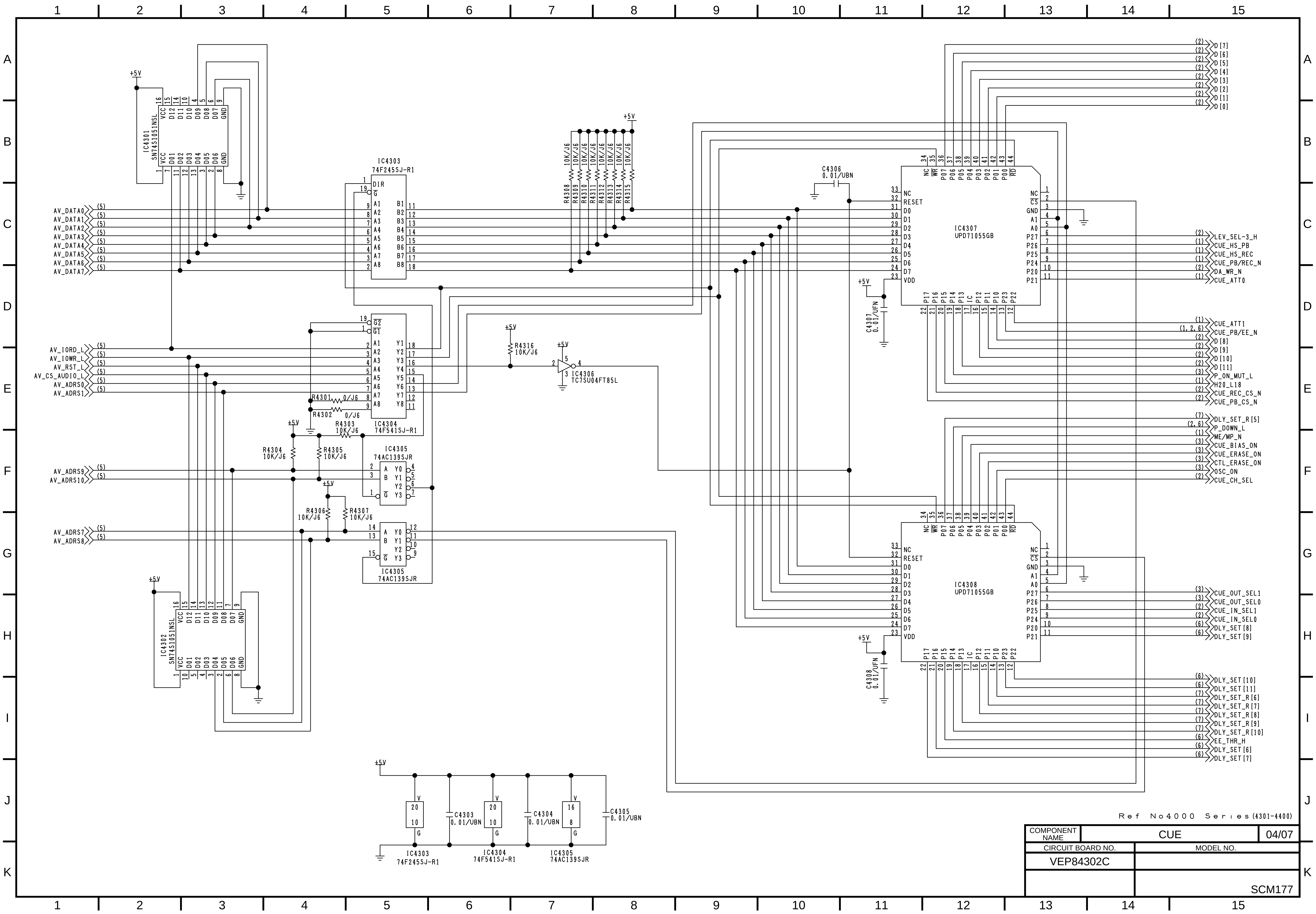
Ref No4000 Series (4101-4200)

COMPONENT NAME	CUE	02/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP84302C		
	SCM175	


H20_L18 (4)
CUE_MONI (6)
CUE_OUT_SEL1 (4)
CUE_OUT_SEL0 (4)
R4201 300/RE
R4202 4700/RE
R4203 2700/RE
R4204 12K/RE
R4281 5100/RE
R4282 300/RE
R4205 4700/RE
R4206 1000/RE
R4207 10K/RE
R4208 56K/J6
IC4201 MC14052BF-R
IC4202 NJM4580ED-T1
R4283 390/RE
R4284 2200/RE
R4285 10K/RE
IC4207 TC4W53FTE12L
+5V_D
-5V_D
R4286 PAT/J6
C4201 0.1/UFN
C4247 470P/UN
R4210 270/RE
VR4201 PAT/VR2
CW
R4211 15K/RE
R4209 4700/RE
C4202 0.1/UFN
TP4201 VJR0646
IC4203 NJM2043MD-T1
R4212 4700/RE
R4213 1M/J6
C4203 47P/UN
R4214 15K/RE
R4215 15K/RE
R4279 0/J6
R4216 4700/RE
R4222 10/J6
C4204 16V10/EVV
C4205 16V10/EVV
D4201 MA157-TX
R4223 5600/J6
R4224 5600/J6
Q4201 2SD1994AQRTA
Q4202 2SB1322AQRTA
R4228 10(1/4W)
R4229 10(1/4W)
C4211 16V22/EVV
R4232 22(1/4W)
C4216 16V100/EGE
Q4205 2SD602A-RTX
C4212 0.1/UFN
C4213 16V22/EVV
R4234 1000/J6
C4214 0.1/UFN
C4215 16V47/EVV
IC4204 AQV212SX
R4235 10K/J6
R4238 560/J6
+5V
R4240 10K/J6
QR4201 UN2213-TX
R4241 10K/J6
C4248 PAT/UFN
R4242 0/J6
P_ON_MUT_L (4)
CUE_OUT_H (5)
CUE_OUT_G (5)
CUE_OUT_C (5)
-12V (1,5)
R4217 15K/RE
R4280 0/J6
R4218 4700/RE
R4219 4700/RE
C4206 0.01/UBN
R4226 5600/J6
Q4203 2SD1994AQRTA
R4225 10/J6
C4209 16V10/EVV
D4202 MA157-TX
C4210 16V10/EVV
R4220 1M/J6
C4207 47P/UN
C4208 0.01/UBN
R4227 5600/J6
R4230 10(1/4W)
R4231 10(1/4W)
Q4204 2SB1322AQRTA
R4221 15K/RE
R4233 22(1/4W)
C4217 16V100/EGE
R4239 560/J6
R4236 10K/J6
R4243 10K/J6
IC4205 AQV212SX
Q4206 2SB710A-QRTX
R4237 1000/J6
C4218 16V22/EVV
C4219 0.1/UFN
C4220 16V22/EVV
C4221 0.1/UFN
C4222 16V47/EVV
OSC_ON (4)
+12V (1,5)
CUE_BIAS_ON (4)
CUE_ERASE_ON (4)
CTL_ERASE_ON (4)
FL4201 VLF0941C223T
IC4206 AN78N09
C4223 0.1/UFN
C4224 0.1/UFN
C4225 0.1/UFN
C4226 16V10/EVV
GND2
Q4207 2SB710A-QRTX
R4244 3300/J6
C4227 0.47/UBM
R4247 4700/J6
R4245 56K/J6
Q4208 2SD602A-RTX
R4246 56K/J6
R4252 33K/J6
R4253 4700/J6
C4229 4700P/UBN
C4230 4700P/UBN
Q4211 2SD602A-RTX
R4254 100/J6
R4255 47/J6
T4201 VLT0866
C4233 0.022/HUB
C4232 16V10/EVV
R4259 56K/J6
Q4209 2SB710A-QRTX
R4248 1000/J6
C4228 0.47/UBM
R4251 4700/J6
R4249 56K/J6
Q4210 2SD602A-RTX
R4250 56K/J6
C4231 0.01/UBN
R4256 12K/J6
Q4212 2SD602A-RTX
D4203 MA152A-TX
R4257 1500/J6
R4258 22/J6
C4234 50V4R7/EVV
T4202 VLT0868
C4235 680P(630V)
R4260 3300/J6
Q4213 2SB710A-QRTX
C4236 0.47/UBM
R4261 4700/J6
Q4214 2SD602A-RTX
R4262 56K/J6
C4237 0.01/UBN
R4267 470/J6
Q4217 2SD602A-RTX
D4204 MA152A-TX
R4268 470/J6
R4269 18/J6
C4240 16V22/EVV
T4203 VLT0867
C4242 6800P(400V)
Q4215 2SB710A-QRTX
R4263 3300/J6
C4238 0.47/UBM
R4264 4700/J6
R4265 56K/J6
Q4216 2SD602A-RTX
R4266 56K/J6
R4270 10K/J6
Q4218 2SD602A-RTX
C4239 0.1/UFN
R4271 10K/J6
R4272 2200/J6
C4241 0.1/UFN
FL4202 VLF0941C223T
-9V
C4243 0.01/UBN
R4274 470/J6
Q4219 2SD602A-RTX
D4205 MA152A-TX
R4275 470/J6
R4276 18/J6
C4244 16V22/EVV
T4204 VLT0867
C4245 6800P(400V)
TP4202 VJR0646
R4273 1
TG4201 VJR0646
TP4203 VJR0646
R4277 1
P4003 VJP1233T
6 CTL EH H
5 CTL EH C
4 CTL EH G
3 CUE EH H
2 CUE EH C
1 CUE EH G
C4246 470P/UN
R4278 12K/J6
VR4202 100K/VR2
CUE BIAS
CUE_BIAS_IN (1)
+5V_D
IC4201 MC14052BF-R
VCC
VEE
VSS
-5V_D

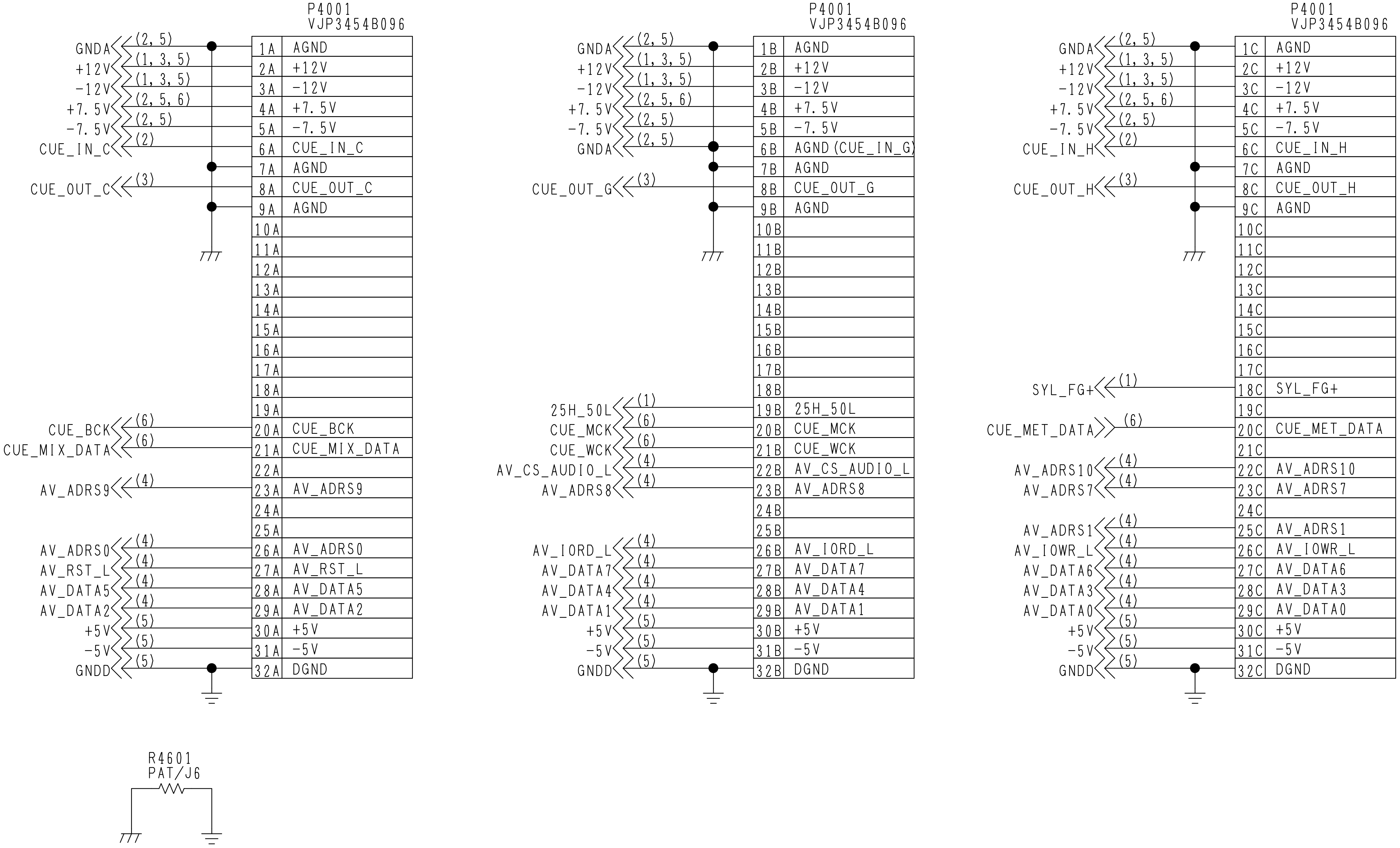
Ref No4000 Series (4201-4300)

COMPONENT NAME	CUE	03/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP84302C		
	SCM176	


IC4301
SN74S1051NSL
VCC D12 D11 D10 D09 D08 D07 GND
VCC D01 D02 D03 D04 D05 D06 GND
+5V
AV_DATA0 (5)
AV_DATA1 (5)
AV_DATA2 (5)
AV_DATA3 (5)
AV_DATA4 (5)
AV_DATA5 (5)
AV_DATA6 (5)
AV_DATA7 (5)
IC4303
74F245SJ-R1
DIR
G
A1 A2 A3 A4 A5 A6 A7 A8
B1 B2 B3 B4 B5 B6 B7 B8
AV_IORD_L (5)
AV_IOWR_L (5)
AV_RST_L (5)
AV_CS_AUDIO_L (5)
AV_ADRS0 (5)
AV_ADRS1 (5)
G2
G1
Y1 Y2 Y3 Y4 Y5 Y6 Y7 Y8
IC4304
74F541SJ-R1
R4301 0/J6
R4302 0/J6
R4303 10K/J6
R4304 10K/J6
R4305 10K/J6
R4306 10K/J6
R4307 10K/J6
IC4305
74AC139SJR
A B G Y0 Y1 Y2 Y3
AV_ADRS9 (5)
AV_ADRS10 (5)
AV_ADRS7 (5)
AV_ADRS8 (5)
IC4302
SN74S1051NSL
R4308 10K/J6
R4309 10K/J6
R4310 10K/J6
R4311 10K/J6
R4312 10K/J6
R4313 10K/J6
R4314 10K/J6
R4315 10K/J6
R4316 10K/J6
IC4306
TC7SU04FT85L
C4306 0.01/UBN
C4307 0.01/UFN
C4308 0.01/UFN
IC4307
UPD71055GB
IC4308
UPD71055GB
NC WR P07 P06 P05 P04 P03 P02 P01 P00 RD
NC RESET D0 D1 D2 D3 D4 D5 D6 D7 VDD
NC CS GND A1 A0 P27 P26 P25 P24 P20 P21
P17 P16 P15 P14 P13 IC P12 P11 P10 P23 P22
(2) D[7]
(2) D[6]
(2) D[5]
(2) D[4]
(2) D[3]
(2) D[2]
(2) D[1]
(2) D[0]
(2) LEV_SEL-3_H
(1) CUE_HS_PB
(1) CUE_HS_REC
(1) CUE_PB/REC_N
(2) DA_WR_N
(1) CUE_ATT0
(1) CUE_ATT1
(1, 2, 6) CUE_PB/EE_N
(2) D[8]
(2) D[9]
(2) D[10]
(2) D[11]
(3) P_ON_MUT_L
(1) H20_L18
(2) CUE_REC_CS_N
(2) CUE_PB_CS_N
(7) DLY_SET_R[5]
(2, 6) P_DOWN_L
(1) ME/MP_N
(3) CUE_BIAS_ON
(3) CUE_ERASE_ON
(3) CTL_ERASE_ON
(3) OSC_ON
(2) CUE_CH_SEL
(3) CUE_OUT_SEL1
(3) CUE_OUT_SEL0
(2) CUE_IN_SEL1
(2) CUE_IN_SEL0
(6) DLY_SET[8]
(6) DLY_SET[9]
(6) DLY_SET[10]
(6) DLY_SET[11]
(7) DLY_SET_R[6]
(7) DLY_SET_R[7]
(7) DLY_SET_R[8]
(7) DLY_SET_R[9]
(7) DLY_SET_R[10]
(6) EE_THR_H
(6) DLY_SET[6]
(6) DLY_SET[7]
C4303 0.01/UBN
C4304 0.01/UBN
C4305 0.01/UBN
IC4303 74F245SJ-R1
IC4304 74F541SJ-R1
IC4305 74AC139SJR
V G

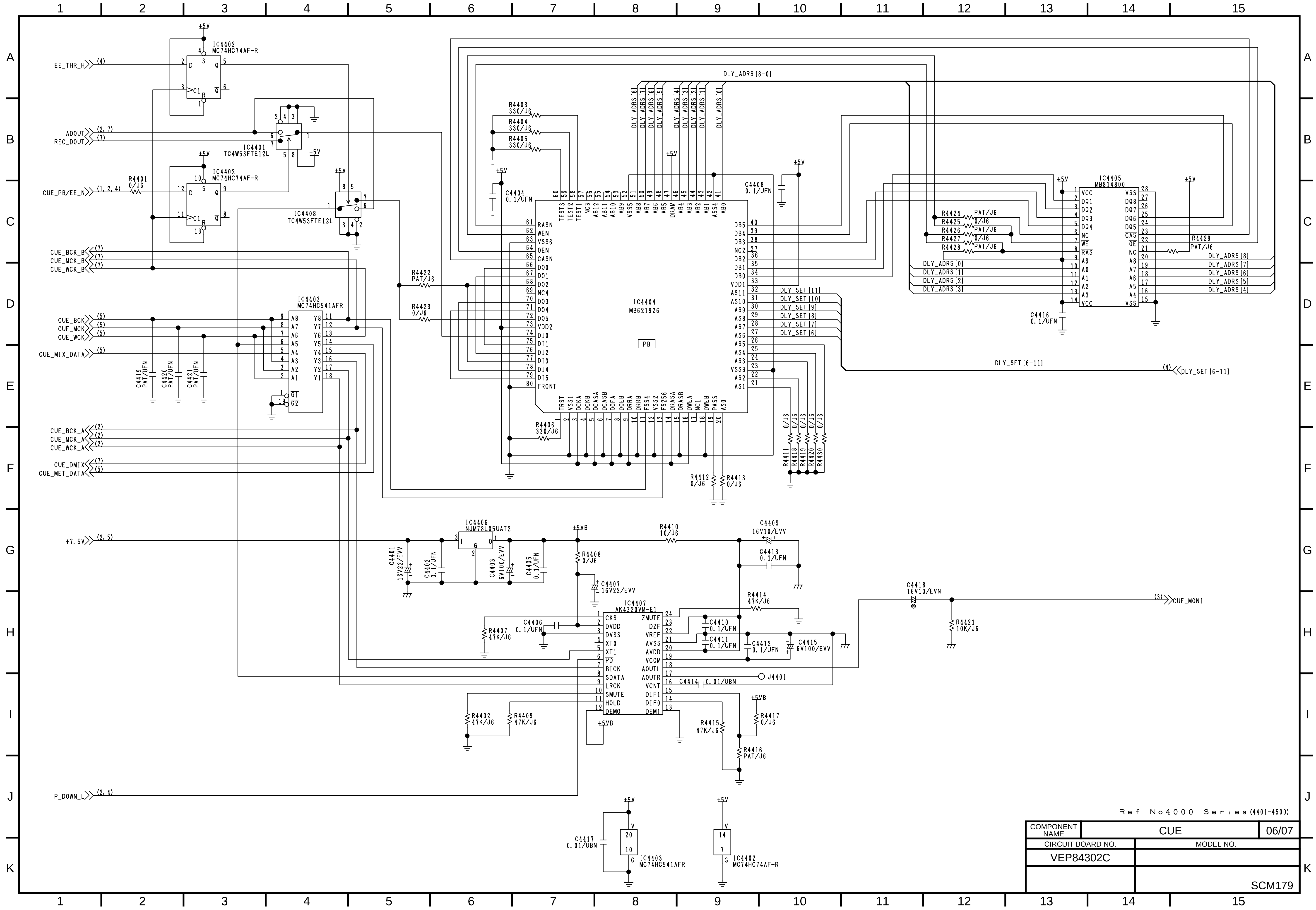
Ref No4000 Series(4301-4400)

COMPONENT NAME	CUE	04/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP84302C		
	SCM177	


P4001
VJP3454B096
GNDA (2,5) 1A AGND
+12V (1,3,5) 2A +12V
-12V (1,3,5) 3A -12V
+7.5V (2,5,6) 4A +7.5V
-7.5V (2,5) 5A -7.5V
CUE_IN_C (2) 6A CUE_IN_C
7A AGND
CUE_OUT_C (3) 8A CUE_OUT_C
9A AGND
10A
11A
12A
13A
14A
15A
16A
17A
18A
19A
CUE_BCK (6) 20A CUE_BCK
CUE_MIX_DATA (6) 21A CUE_MIX_DATA
22A
AV_ADRS9 (4) 23A AV_ADRS9
24A
25A
AV_ADRS0 (4) 26A AV_ADRS0
AV_RST_L (4) 27A AV_RST_L
AV_DATA5 (4) 28A AV_DATA5
AV_DATA2 (4) 29A AV_DATA2
+5V (5) 30A +5V
-5V (5) 31A -5V
GNDD (5) 32A DGND
P4001
VJP3454B096
GNDA (2,5) 1B AGND
+12V (1,3,5) 2B +12V
-12V (1,3,5) 3B -12V
+7.5V (2,5,6) 4B +7.5V
-7.5V (2,5) 5B -7.5V
GNDA (2,5) 6B AGND(CUE_IN_G)
7B AGND
CUE_OUT_G (3) 8B CUE_OUT_G
9B AGND
10B
11B
12B
13B
14B
15B
16B
17B
18B
25H_50L (1) 19B 25H_50L
CUE_MCK (6) 20B CUE_MCK
CUE_WCK (6) 21B CUE_WCK
AV_CS_AUDIO_L (4) 22B AV_CS_AUDIO_L
AV_ADRS8 (4) 23B AV_ADRS8
24B
25B
AV_IORD_L (4) 26B AV_IORD_L
AV_DATA7 (4) 27B AV_DATA7
AV_DATA4 (4) 28B AV_DATA4
AV_DATA1 (4) 29B AV_DATA1
+5V (5) 30B +5V
-5V (5) 31B -5V
GNDD (5) 32B DGND
P4001
VJP3454B096
GNDA (2,5) 1C AGND
+12V (1,3,5) 2C +12V
-12V (1,3,5) 3C -12V
+7.5V (2,5,6) 4C +7.5V
-7.5V (2,5) 5C -7.5V
CUE_IN_H (2) 6C CUE_IN_H
7C AGND
CUE_OUT_H (3) 8C CUE_OUT_H
9C AGND
10C
11C
12C
13C
14C
15C
16C
17C
SYL_FG+ (1) 18C SYL_FG+
19C
CUE_MET_DATA (6) 20C CUE_MET_DATA
21C
AV_ADRS10 (4) 22C AV_ADRS10
AV_ADRS7 (4) 23C AV_ADRS7
24C
AV_ADRS1 (4) 25C AV_ADRS1
AV_IOWR_L (4) 26C AV_IOWR_L
AV_DATA6 (4) 27C AV_DATA6
AV_DATA3 (4) 28C AV_DATA3
AV_DATA0 (4) 29C AV_DATA0
+5V (5) 30C +5V
-5V (5) 31C -5V
GNDD (5) 32C DGND
R4601
PAT/J6

Ref No4000 Series

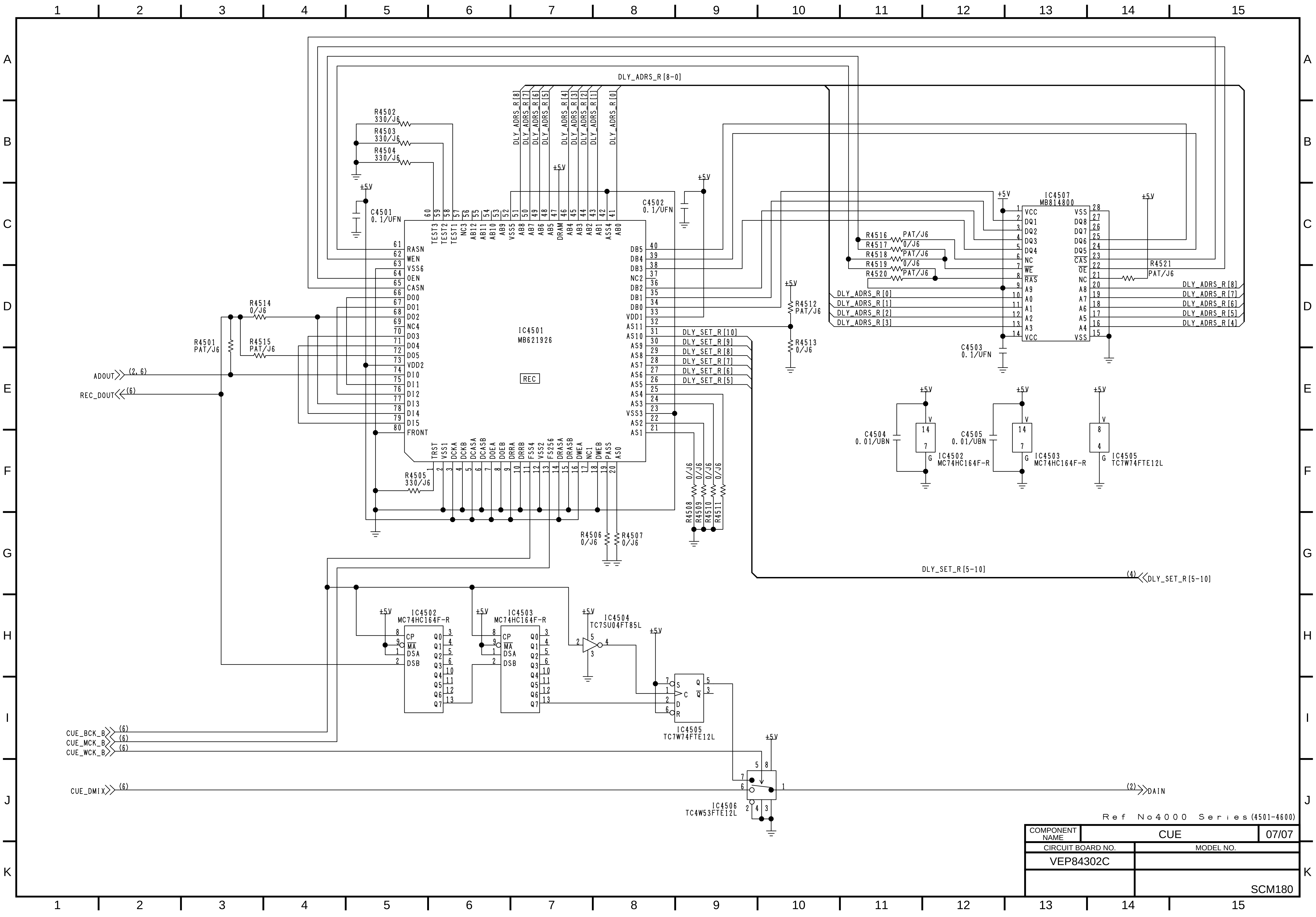
COMPONENT NAME
CUE
05/07
CIRCUIT BOARD NO.
VEP84302C
MODEL NO.
SCM178



IC4402 MC74HC74AF-R
IC4401 TC4W53FTE12L
IC4408 TC4W53FTE12L
IC4403 MC74HC541AFR
IC4404 MB621926
IC4405 MB814800
IC4406 NJM78L05UAT2
IC4407 AK4320VM-E1
EE_THR_H (4)
ADOUT (2, 7)
REC_DOUT (7)
CUE_PB/EE_N (1, 2, 4)
CUE_BCK_B (7)
CUE_MCK_B (7)
CUE_WCK_B (7)
CUE_BCK (5)
CUE_MCK (5)
CUE_WCK (5)
CUE_MIX_DATA (5)
CUE_BCK_A (2)
CUE_MCK_A (2)
CUE_WCK_A (2)
CUE_DMIX (7)
CUE_MET_DATA (5)
+7.5V (2, 5)
P_DOWN_L (2, 4)
CUE_MONI (3)
DLY_SET[6-11] (4)
DLY_ADRS[8-0]
DLY_SET[6-11]
R4401 0/J6
R4402 47K/J6
R4403 330/J6
R4404 330/J6
R4405 330/J6
R4406 330/J6
R4407 47K/J6
R4408 0/J6
R4409 47K/J6
R4410 10/J6
R4411 0/J6
R4412 0/J6
R4413 0/J6
R4414 47K/J6
R4415 47K/J6
R4416 PAT/J6
R4417 0/J6
R4418 0/J6
R4419 0/J6
R4420 0/J6
R4421 10K/J6
R4422 PAT/J6
R4423 0/J6
R4424 PAT/J6
R4425 0/J6
R4426 PAT/J6
R4427 0/J6
R4428 PAT/J6
R4429 PAT/J6
R4430 0/J6
C4401 16V22/EVV
C4402 0.1/UFN
C4403 6V100/EVV
C4404 0.1/UFN
C4405 0.1/UFN
C4406 0.1/UFN
C4407 16V22/EVV
C4408 0.1/UFN
C4409 16V10/EVV
C4410 0.1/UFN
C4411 0.1/UFN
C4412 0.1/UFN
C4413 0.1/UFN
C4414 0.01/UBN
C4415 6V100/EVV
C4416 0.1/UFN
C4417 0.01/UBN
C4418 16V10/EVN
C4419 PAT/UFN
C4420 PAT/UFN
C4421 PAT/UFN
J4401
+5V
+5VB
PB

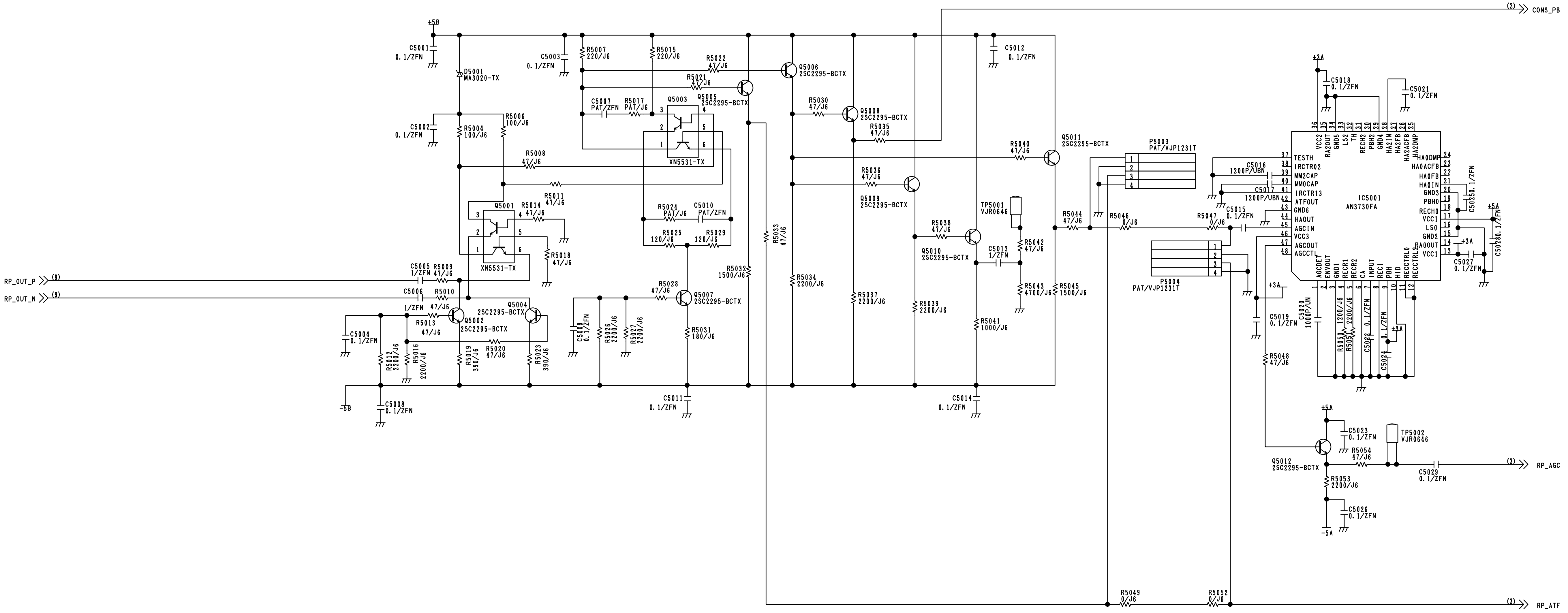
Ref No4000 Series(4401-4500)

COMPONENT NAME	CUE	06/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP84302C		
	SCM179	

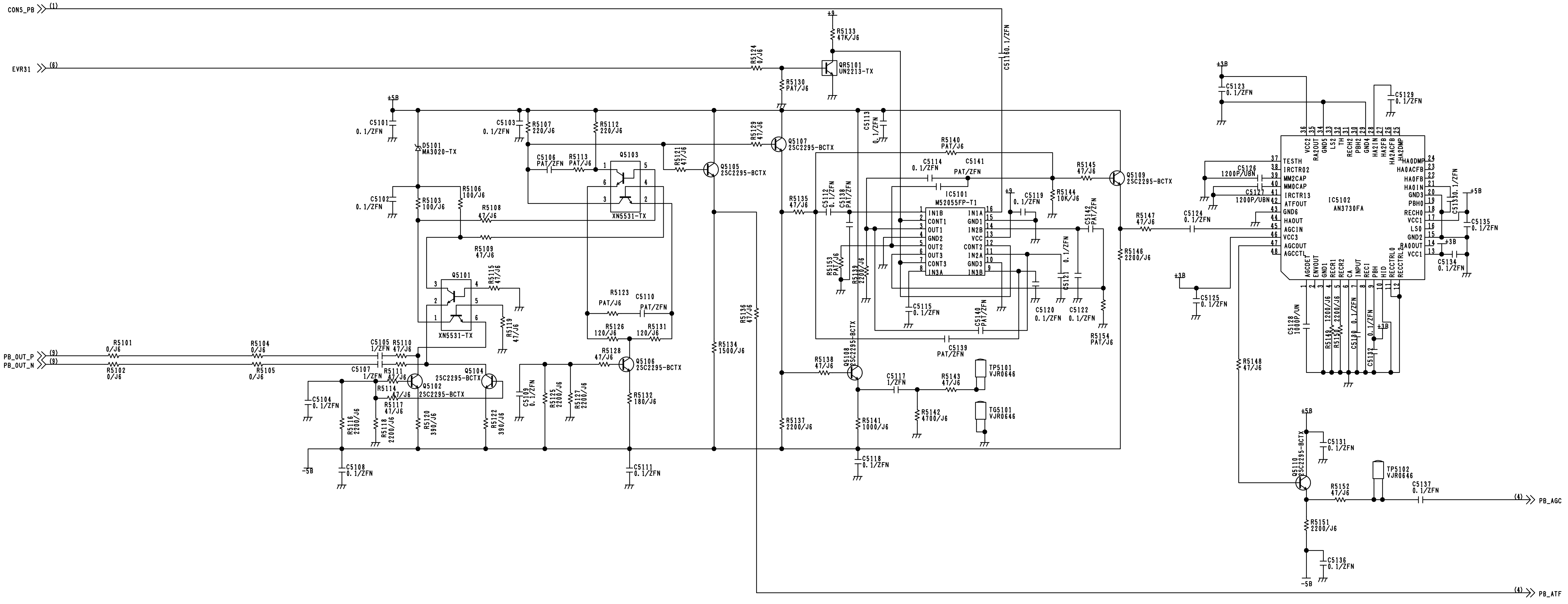

IC4501
MB621926
REC
IC4507
MB814800
IC4502
MC74HC164F-R
IC4503
MC74HC164F-R
IC4504
TC7SU04FT85L
IC4505
TC7W74FTE12L
IC4506
TC4W53FTE12L
R4502 330/J6
R4503 330/J6
R4504 330/J6
R4505 330/J6
R4501 PAT/J6
R4514 0/J6
R4515 PAT/J6
R4506 0/J6
R4507 0/J6
R4508 0/J6
R4509 0/J6
R4510 0/J6
R4511 0/J6
R4512 PAT/J6
R4513 0/J6
R4516 PAT/J6
R4517 0/J6
R4518 PAT/J6
R4519 0/J6
R4520 PAT/J6
R4521 PAT/J6
C4501 0.1/UFN
C4502 0.1/UFN
C4503 0.1/UFN
C4504 0.01/UBN
C4505 0.01/UBN
+5V
DLY_ADRS_R[8-0]
DLY_SET_R[5-10]
ADOUT (2, 6)
REC_DOUT (6)
CUE_BCK_B (6)
CUE_MCK_B (6)
CUE_WCK_B (6)
CUE_DMIX (6)
(4) DLY_SET_R[5-10]
(2) DAIN
RASN
WEN
VSS6
OEN
CASN
DO0
DO1
DO2
NC4
DO3
DO4
DO5
VDD2
DI0
DI1
DI2
DI3
DI4
DI5
FRONT
TEST3
TEST2
TEST1
NC3
AB12
AB11
AB10
AB9
VSS5
AB8
AB7
AB6
AB5
DRAM
AB4
AB3
AB2
AB1
ASS4
AB0
DB5
DB4
DB3
NC2
DB2
DB1
DB0
VDD1
AS11
AS10
AS9
AS8
AS7
AS6
AS5
AS4
AS3
VSS3
AS2
AS1
TRST
VSS1
DCKA
DCKB
DCASA
DCASB
DOEA
DOEB
DRRA
DRRB
FSS4
VSS2
FS256
DRASA
DRASB
DWEA
NC1
DWEB
PASS
AS0
VCC
DQ1
DQ2
DQ3
DQ4
NC
WE
RAS
A9
A0
A1
A2
A3
VSS
DQ8
DQ7
DQ6
DQ5
CAS
OE
A8
A7
A6
A5
A4
CP
MA
DSA
DSB
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
S
C
D
R
Q
V
G
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

Ref No4000 Series(4501-4600)

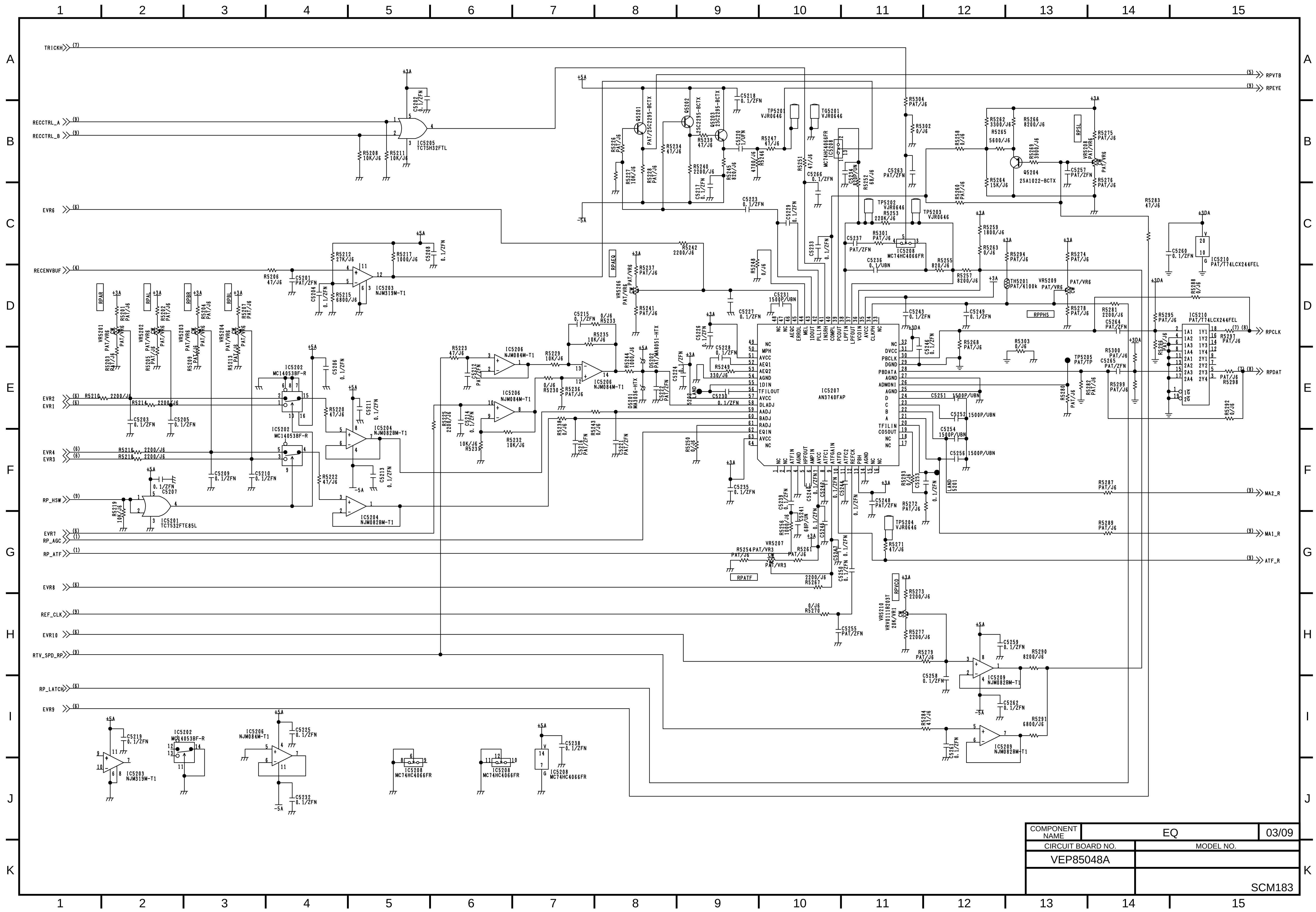
COMPONENT NAME	CUE	07/07
CIRCUIT BOARD NO.	MODEL NO.	
VEP84302C		
	SCM180	


+5B
C5001
0.1/ZFN
D5001
MA3020-TX
C5002
0.1/ZFN
R5004
100/J6
R5006
100/J6
R5008
47/J6
R5011
47/J6
Q5001
R5014
47/J6
R5018
47/J6
XN5531-TX
RP_OUT_P
(9)
RP_OUT_N
(9)
C5005
1/ZFN
R5009
47/J6
C5006
1/ZFN
R5010
47/J6
Q5004
2SC2295-BCTX
R5013
47/J6
Q5002
2SC2295-BCTX
C5004
0.1/ZFN
R5012
2200/J6
R5016
2200/J6
R5019
390/J6
R5020
47/J6
R5023
390/J6
-5B
C5008
0.1/ZFN
C5003
0.1/ZFN
R5007
220/J6
R5015
220/J6
R5022
47/J6
Q5006
2SC2295-BCTX
R5021
47/J6
C5007
PAT/ZFN
R5017
PAT/J6
Q5003
Q5005
2SC2295-BCTX
XN5531-TX
R5024
PAT/J6
C5010
PAT/ZFN
R5025
120/J6
R5029
120/J6
R5028
47/J6
Q5007
2SC2295-BCTX
C5009
0.1/ZFN
R5026
2200/J6
R5027
2200/J6
R5031
180/J6
C5011
0.1/ZFN
R5033
47/J6
R5032
1500/J6
R5034
2200/J6
R5030
47/J6
Q5008
2SC2295-BCTX
R5035
47/J6
R5036
47/J6
Q5009
2SC2295-BCTX
R5037
2200/J6
R5039
2200/J6
R5038
47/J6
Q5010
2SC2295-BCTX
C5013
1/ZFN
TP5001
VJR0646
R5042
47/J6
R5043
4700/J6
R5041
1000/J6
C5014
0.1/ZFN
C5012
0.1/ZFN
R5040
47/J6
Q5011
2SC2295-BCTX
R5045
1500/J6
R5044
47/J6
(2)
CONS_PB
P5003
PAT/VJP1231T
R5046
0/J6
P5004
PAT/VJP1231T
R5047
0/J6
C5015
0.1/ZFN
C5016
1200P/UBN
C5017
1200P/UBN
+3A
C5018
0.1/ZFN
C5021
0.1/ZFN
IC5001
AN3730FA
VCC2
RA2OUT
GND5
LS2
TH
RECH2
PBH2
GND4
HA2IN
HA2FB
HA2ACFB
HA2DMP
TESTH
IRCTR02
MM2CAP
MM0CAP
IRCTR13
ATFOUT
GND6
HAOUT
AGCIN
VCC3
AGCOUT
AGCCTL
HA0DMP
HA0ACFB
HA0FB
HA0IN
GND3
PBH0
RECH0
VCC1
LS0
GND2
RA0OUT
VCC1
AGCDET
ENVOUT
GND1
RECR1
RECR2
CA
INPUT
RECI
PBH
HID
RECCTRL0
RECCTRL2
C5025
0.1/ZFN
+5A
C5028
0.1/ZFN
+3A
C5027
0.1/ZFN
C5019
0.1/ZFN
C5020
1000P/UN
R5050
1200/J6
R5051
2200/J6
C5022
0.1/ZFN
C5024
0.1/ZFN
+3A
R5048
47/J6
+5A
C5023
0.1/ZFN
TP5002
VJR0646
Q5012
2SC2295-BCTX
R5054
47/J6
C5029
0.1/ZFN
(3)
RP_AGC
R5053
2200/J6
C5026
0.1/ZFN
-5A
R5049
0/J6
R5052
0/J6
(3)
RP_ATF

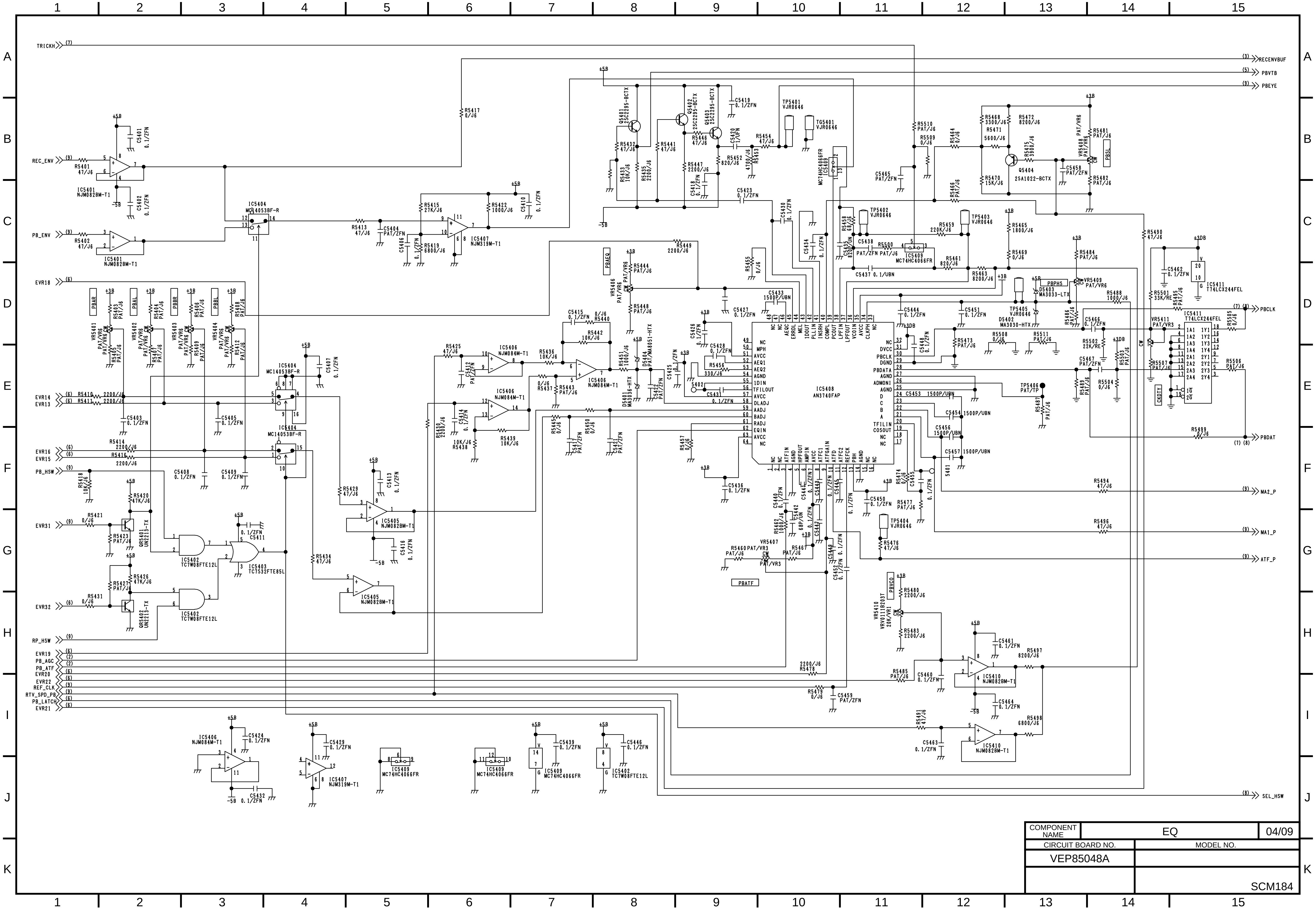
COMPONENT NAME	EQ	01/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM181	


CONS_PB (1)
EVR31 (6)
PB_OUT_P (9)
PB_OUT_N (9)
R5101 0/J6
R5102 0/J6
R5104 0/J6
R5105 0/J6
C5105 1/ZFN
C5107 1/ZFN
R5110 47/J6
R5111 47/J6
R5114 47/J6
R5117 47/J6
Q5102 2SC2295-BCTX
Q5104 2SC2295-BCTX
C5104 0.1/ZFN
R5116 2200/J6
R5118 2200/J6
R5120 390/J6
R5122 390/J6
-5B
C5108 0.1/ZFN
+5B
C5101 0.1/ZFN
D5101 MA3020-TX
C5102 0.1/ZFN
R5103 100/J6
R5106 100/J6
R5108 47/J6
R5109 47/J6
Q5101
R5115 47/J6
R5119 47/J6
XN5531-TX
C5103 0.1/ZFN
R5107 220/J6
R5112 220/J6
C5106 PAT/ZFN
R5113 PAT/J6
Q5103
XN5531-TX
R5121 47/J6
Q5105 2SC2295-BCTX
R5129 47/J6
Q5107 2SC2295-BCTX
R5123 PAT/J6
C5110 PAT/ZFN
R5126 120/J6
R5131 120/J6
R5128 47/J6
Q5106 2SC2295-BCTX
C5109 0.1/ZFN
R5125 2200/J6
R5127 2200/J6
R5132 180/J6
C5111 0.1/ZFN
R5134 1500/J6
R5136 47/J6
R5124 0/J6
R5130 PAT/J6
+9
R5133 47K/J6
QR5101 UN2213-TX
C5116 0.1/ZFN
C5113 0.1/ZFN
R5135 47/J6
C5112 0.1/ZFN
C5138 PAT/ZFN
R5153 PAT/J6
R5139 2200/J6
R5140 PAT/J6
C5114 0.1/ZFN
C5141 PAT/ZFN
IC5101 M52055FP-T1
IN1B CONT1 OUT1 GND2 OUT2 OUT3 CONT3 IN3A
IN1A GND1 IN2B VCC CONT2 IN2A GND3 IN3B
C5119 0.1/ZFN
R5144 10K/J6
R5145 47/J6
Q5109 2SC2295-BCTX
C5142 PAT/ZFN
C5121 0.1/ZFN
C5120 0.1/ZFN
C5122 0.1/ZFN
R5154 PAT/J6
R5146 2200/J6
C5115 0.1/ZFN
C5140 PAT/ZFN
C5139 PAT/ZFN
R5137 2200/J6
R5138 47/J6
Q5108 2SC2295-BCTX
C5117 1/ZFN
R5143 47/J6
TP5101 VJR0646
TG5101 VJR0646
R5141 1000/J6
R5142 4700/J6
C5118 0.1/ZFN
R5147 47/J6
C5124 0.1/ZFN
+3B
C5123 0.1/ZFN
C5129 0.1/ZFN
C5126 1200P/UBN
C5127 1200P/UBN
IC5102 AN3730FA
VCC2 RA2OUT GND5 LS2 TH RECH2 PBH2 GND4 HA2IN HA2FB HA2ACFB HA2DMP
TESTH IRCTR02 MM2CAP MM0CAP IRCTR13 ATFOUT GND6 HAOUT AGCIN VCC3 AGCOUT AGCCTL
HA0DMP HA0ACFB HA0FB HA0IN GND3 PBH0 RECH0 VCC1 LS0 GND2 RA0OUT VCC1
AGCDET ENVOUT GND1 RECR1 RECR2 CA INPUT RECI PBH HID RECCTRL0 RECCTRL2
C5133 0.1/ZFN
C5135 0.1/ZFN
C5134 0.1/ZFN
C5125 0.1/ZFN
C5128 1000P/UN
R5149 1200/J6
R5150 2200/J6
C5130 0.1/ZFN
C5132 0.1/ZFN
R5148 47/J6
Q5110 2SC2295-BCTX
C5131 0.1/ZFN
TP5102 VJR0646
R5152 47/J6
C5137 0.1/ZFN
(4) PB_AGC
R5151 2200/J6
C5136 0.1/ZFN
(4) PB_ATF

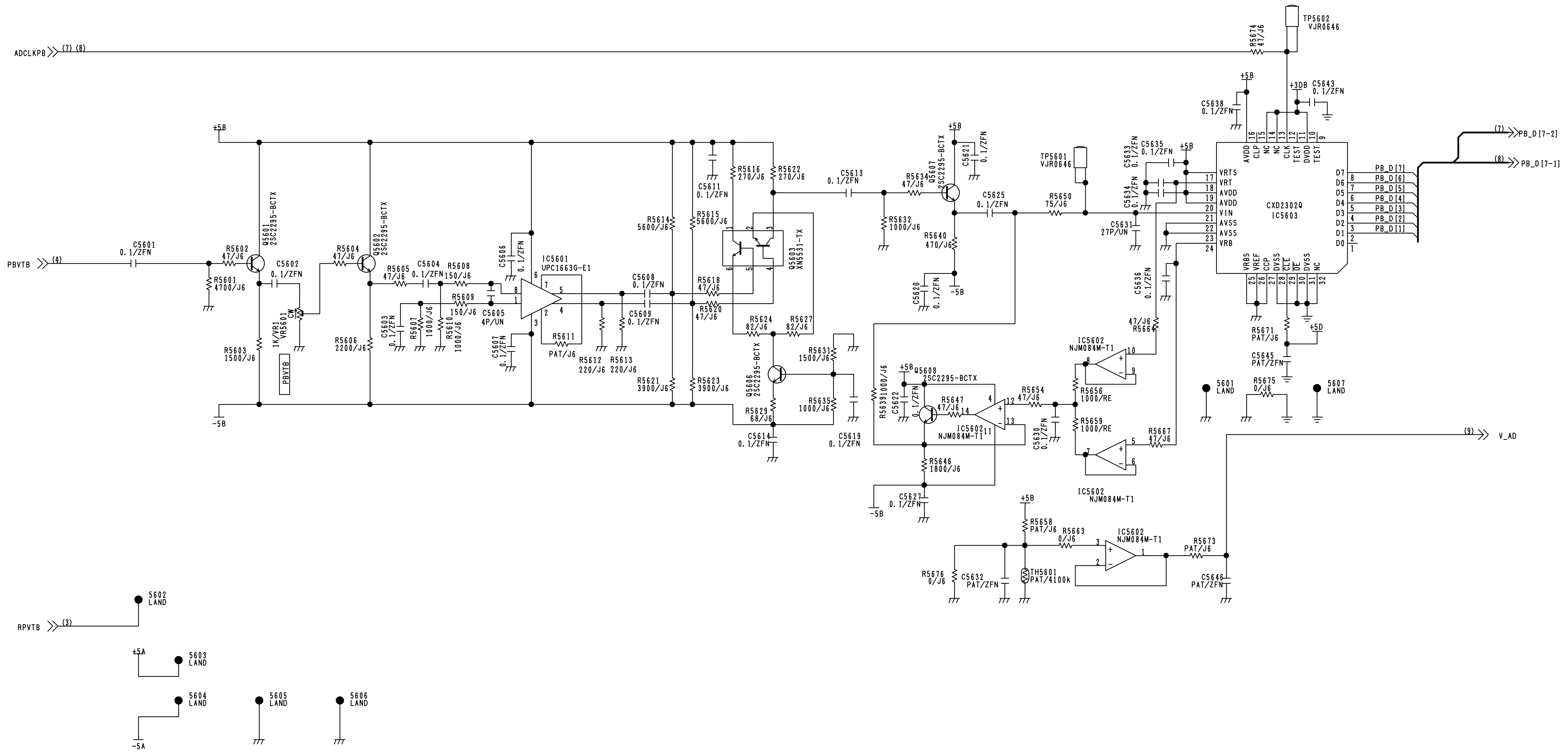
COMPONENT NAME	EQ	02/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM182	


TRICKH (7)
RECCTRL_A (9)
RECCTRL_B (9)
EVR6 (6)
RECENVBUF (4)
EVR2 (6)
EVR1 (6)
EVR4 (6)
EVR3 (6)
RP_HSW (9)
EVR7 (6)
RP_AGC (1)
RP_ATF (1)
EVR8 (6)
REF_CLK (9)
EVR10 (6)
RTV_SPD_RP (9)
RP_LATCH (6)
EVR9 (6)
(5) RPVTB
(9) RPEYE
(7) (8) RPCLK
(7) (8) RPDAT
(9) MA2_R
(9) MA1_R
(9) ATF_R
IC5205 TC7SH32FTL
IC5203 NJM319M-T1
IC5202 MC14053BF-R
IC5201 TC7S32FTE85L
IC5204 NJM082BM-T1
IC5206 NJM084M-T1
IC5207 AN3740FAP
IC5208 MC74HC4066FR
IC5209 NJM082BM-T1
IC5210 PAT/TT74LCX244FEL
Q5201 PAT/2SC2295-BCTX
Q5202 2SC2295-BCTX
Q5203 2SC2295-BCTX
Q5204 2SA1022-BCTX
TP5201 VJR0646
TG5201 VJR0646
TP5202 VJR0646
TP5203 VJR0646
TP5204 VJR0646
TP5205 PAT/TP
TH5201 PAT/4100k
D5201 MA3036-HTX
D5202 PAT/MA8051-HTX
VR5201 PAT/VR6
VR5202 PAT/VR6
VR5203 PAT/VR6
VR5204 PAT/VR6
VR5206 PAT/VR6
VR5207 PAT/VR3
VR5208 PAT/VR6
VR5209 PAT/VR6
VR5210 VRV011182037 20K/VR1
RPAR
RPAL
RPBR
RPBL
RPAEQ
RPSL
RPPHS
RPATF
RPVCO
+5A
-5A
+3A
+3DA
LAND

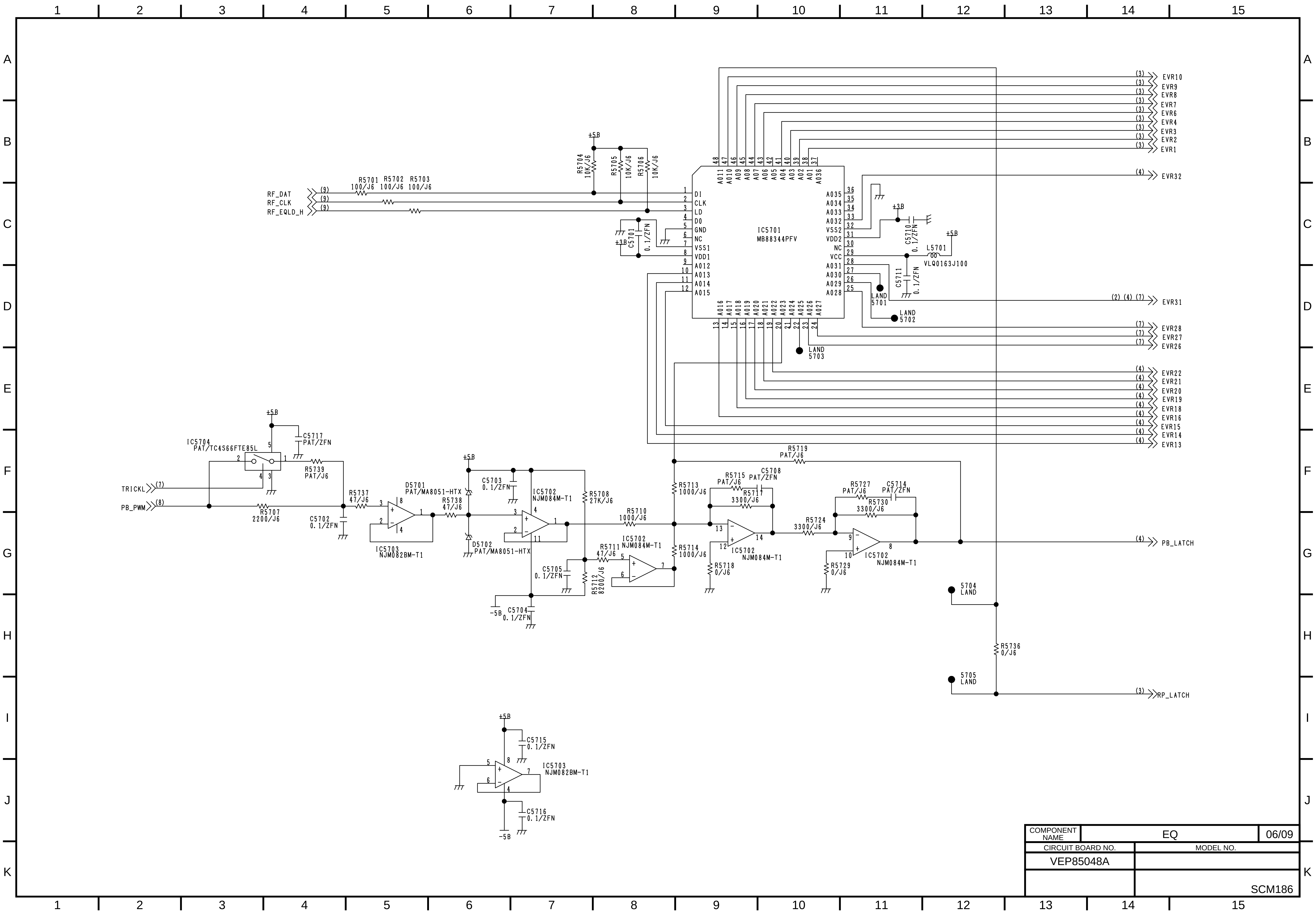
COMPONENT NAME	EQ	03/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM183	


TRICKH
REC_ENV
PB_ENV
EVR18
EVR14
EVR13
EVR16
EVR15
PB_HSW
EVR31
EVR32
RP_HSW
EVR19
PB_AGC
PB_ATF
EVR20
EVR22
REF_CLK
RTV_SPD_PB
PB_LATCH
EVR21
RECENVBUF
PBVTB
PBEYE
PBCLK
PBDAT
MA2_P
MA1_P
ATF_P
SEL_HSW
IC5401 NJM082BM-T1
IC5402 TC7W08FTE12L
IC5403 TC7S32FTE85L
IC5404 MC14053BF-R
IC5405 NJM082BM-T1
IC5406 NJM084M-T1
IC5407 NJM319M-T1
IC5408 AN3740FAP
IC5409 MC74HC4066FR
IC5410 NJM082BM-T1
IC5411 T74LCX244FEL
Q5401 2SC2295-BCTX
Q5402 2SC2295-BCTX
Q5403 2SC2295-BCTX
Q5404 2SA1022-BCTX
QR5401 UN2213-TX
QR5402 UN2213-TX
D5401 MA3036-HTX
D5402 MA3030-HTX
D5403 MA3033-LTX
D5404 PAT/MA8051-HTX
TP5401 VJR0646
TP5402 VJR0646
TP5403 VJR0646
TP5404 VJR0646
TP5405 VJR0646
TP5406 PAT/TP
TG5401 VJR0646
PBAR
PBAL
PBBR
PBBL
PBAEQ
PBATF
PBVCO
PBSL
PBPHS
CKDTY
+5B
-5B
+3B
+3DB
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

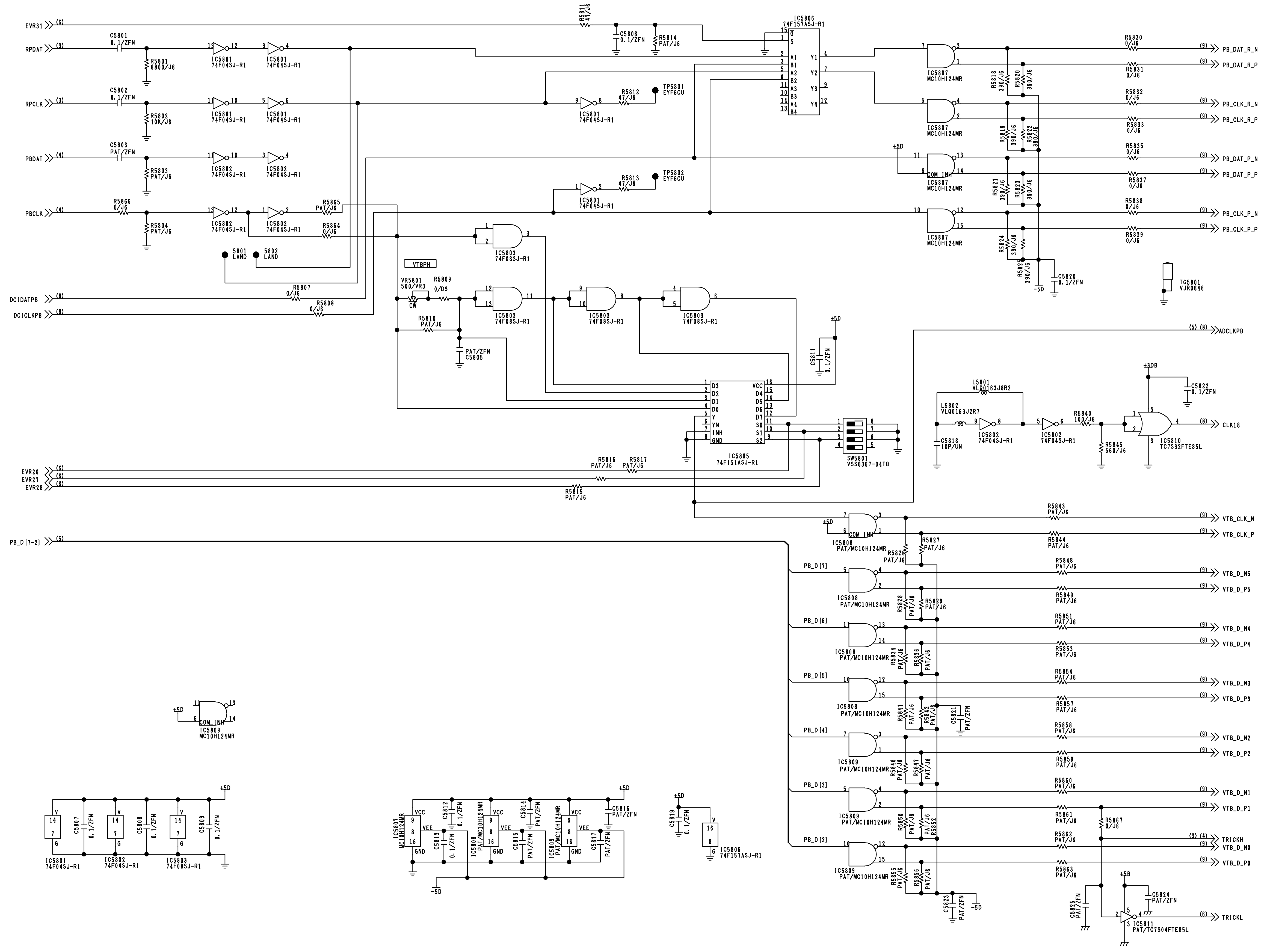
COMPONENT NAME	EQ	04/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM184	


ADCLKPB (7) (8)
PBVTB (4)
RPVTB (3)
+5B
-5B
C5601 0.1/ZFN
R5602 47/J6
R5601 4700/J6
Q5601 2SC2295-BCTX
C5602 0.1/ZFN
R5603 1500/J6
1K/VR1 VR5601 CW
PBVTB
R5604 47/J6
Q5602 2SC2295-BCTX
R5606 2200/J6
R5605 47/J6
C5604 0.1/ZFN
R5608 150/J6
R5609 150/J6
C5605 4P/UN
C5603 0.1/ZFN
R5607 1000/J6
R5610 1000/J6
C5606 0.1/ZFN
C5607 0.1/ZFN
IC5601 UPC1663G-E1
R5611 PAT/J6
R5612 220/J6
R5613 220/J6
C5608 0.1/ZFN
C5609 0.1/ZFN
R5614 5600/J6
R5615 5600/J6
R5621 3900/J6
R5623 3900/J6
C5611 0.1/ZFN
R5616 270/J6
R5622 270/J6
R5618 47/J6
R5620 47/J6
Q5603 XN5531-TX
R5624 82/J6
R5627 82/J6
Q5606 2SC2295-BCTX
R5629 68/J6
R5631 1500/J6
R5635 1000/J6
C5614 0.1/ZFN
C5619 0.1/ZFN
C5613 0.1/ZFN
R5632 1000/J6
R5634 47/J6
Q5607 2SC2295-BCTX
C5621 0.1/ZFN
R5640 470/J6
C5620 0.1/ZFN
C5625 0.1/ZFN
R5639 1000/J6
Q5608 2SC2295-BCTX
C5622 0.1/ZFN
R5647 47/J6
IC5602 NJM084M-T1
R5646 1800/J6
C5627 0.1/ZFN
R5654 47/J6
R5656 1000/RE
R5659 1000/RE
C5630 0.1/ZFN
R5664 47/J6
R5667 47/J6
TP5601 VJR0646
R5650 75/J6
C5631 27P/UN
C5633 0.1/ZFN
C5634 0.1/ZFN
C5635 0.1/ZFN
C5636 0.1/ZFN
C5638 0.1/ZFN
C5643 0.1/ZFN
+3DB
R5674 47/J6
TP5602 VJR0646
CXD2302Q IC5603
VRTS VRT AVDD AVDD VIN AVSS AVSS VRB
AVDD CLP NC NC CLK TEST DVDD TEST
VRBS VREF CCP DVSS CLE OE DVSS NC
D7 D6 D5 D4 D3 D2 D1 D0
PB_D[7] PB_D[6] PB_D[5] PB_D[4] PB_D[3] PB_D[2] PB_D[1] PB_D[0]
(7) PB_D[7-2]
(8) PB_D[7-1]
R5671 PAT/J6
+5D
C5645 PAT/ZFN
R5675 0/J6
5601 LAND
5607 LAND
(9) V_AD
+5B
R5658 PAT/J6
R5663 0/J6
R5676 0/J6
C5632 PAT/ZFN
TH5601 PAT/4100k
R5673 PAT/J6
C5646 PAT/ZFN
5602 LAND
+5A
5603 LAND
5604 LAND
-5A
5605 LAND
5606 LAND

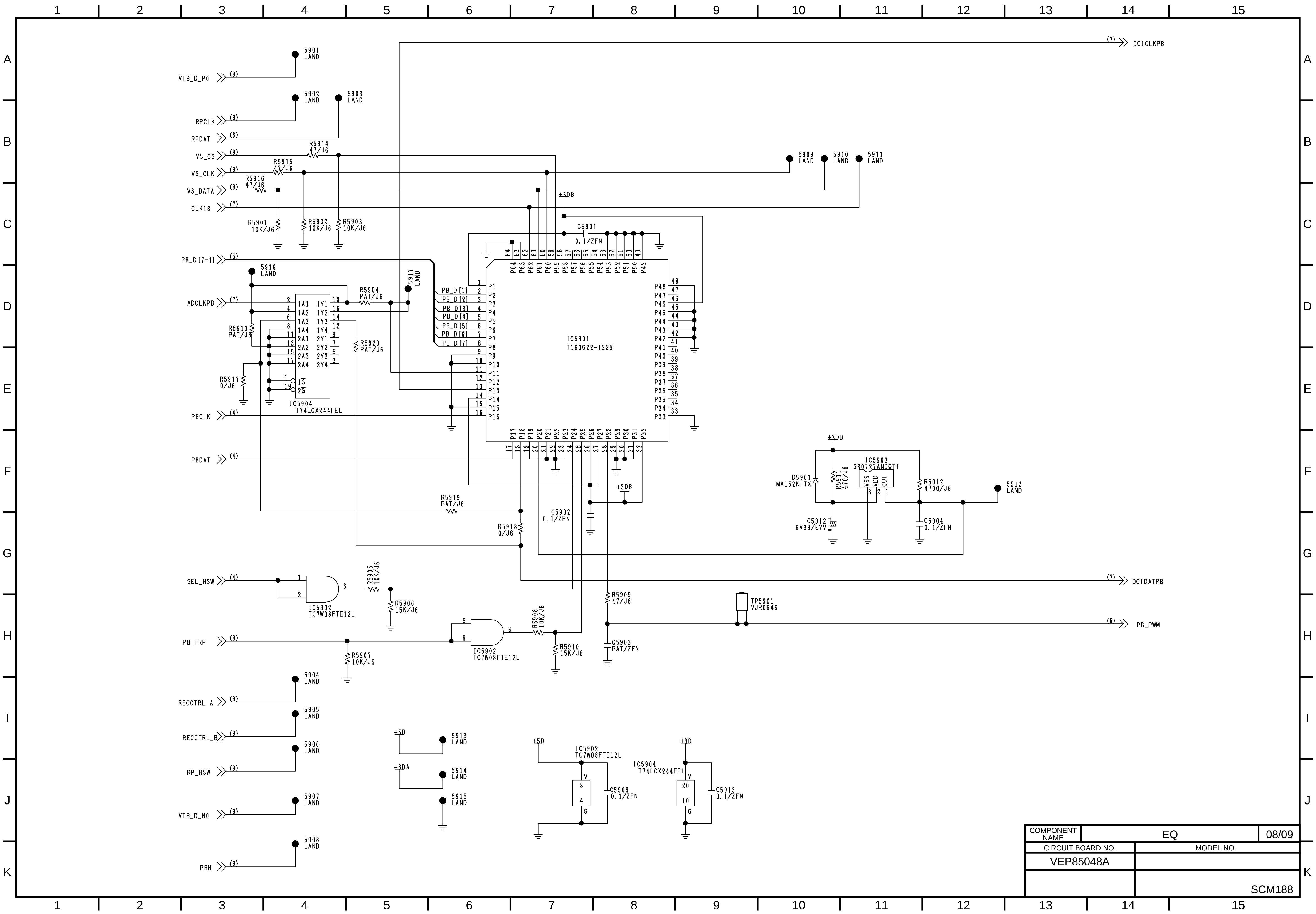
COMPONENT NAME	EQ		05/09
CIRCUIT BOARD NO.		MODEL NO.	
VEP85048A			
		SCM185	


IC5701
MB88344PFV
DI
CLK
LD
DO
GND
NC
VSS1
VDD1
AO12
AO13
AO14
AO15
AO11
AO10
AO9
AO8
AO7
AO6
AO5
AO4
AO3
AO2
AO1
AO36
AO35
AO34
AO33
AO32
VSS2
VDD2
NC
VCC
AO31
AO30
AO29
AO28
AO16
AO17
AO18
AO19
AO20
AO21
AO22
AO23
AO24
AO25
AO26
AO27
RF_DAT
RF_CLK
RF_EQLD_H
(9)
R5701
100/J6
R5702
100/J6
R5703
100/J6
+5B
R5704
10K/J6
R5705
10K/J6
R5706
10K/J6
C5701
0.1/ZFN
+3B
C5710
0.1/ZFN
L5701
VLQ0163J100
C5711
0.1/ZFN
LAND
5701
LAND
5702
LAND
5703
(3) EVR10
(3) EVR9
(3) EVR8
(3) EVR7
(3) EVR6
(3) EVR4
(3) EVR3
(3) EVR2
(3) EVR1
(4) EVR32
(2) (4) (7) EVR31
(7) EVR28
(7) EVR27
(7) EVR26
(4) EVR22
(4) EVR21
(4) EVR20
(4) EVR19
(4) EVR18
(4) EVR16
(4) EVR15
(4) EVR14
(4) EVR13
IC5704
PAT/TC4S66FTE85L
C5717
PAT/ZFN
R5739
PAT/J6
TRICKL
(7)
PB_PWM
(8)
R5707
2200/J6
C5702
0.1/ZFN
R5737
47/J6
IC5703
NJM082BM-T1
D5701
PAT/MA8051-HTX
R5738
47/J6
D5702
PAT/MA8051-HTX
C5703
0.1/ZFN
IC5702
NJM084M-T1
R5708
27K/J6
R5710
1000/J6
R5711
47/J6
C5705
0.1/ZFN
R5712
8200/J6
-5B
C5704
0.1/ZFN
R5719
PAT/J6
R5713
1000/J6
R5714
1000/J6
R5715
PAT/J6
C5708
PAT/ZFN
R5717
3300/J6
R5718
0/J6
R5724
3300/J6
R5727
PAT/J6
C5714
PAT/ZFN
R5730
3300/J6
R5729
0/J6
(4) PB_LATCH
5704
LAND
5705
LAND
R5736
0/J6
(3) RP_LATCH
C5715
0.1/ZFN
C5716
0.1/ZFN
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

COMPONENT NAME	EQ	06/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM186	

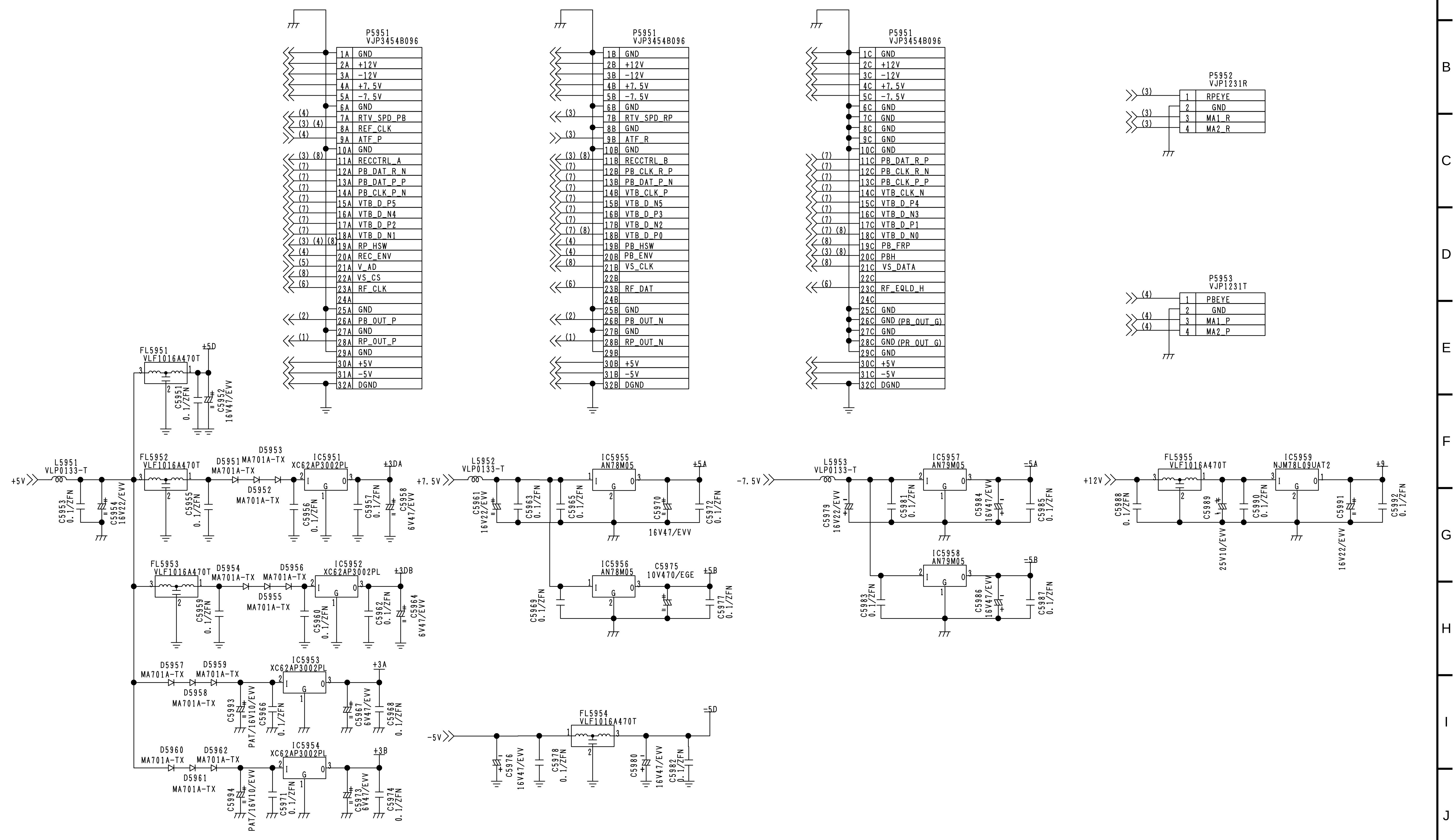

EVR31
RPDAT
RPCLK
PBDAT
PBCLK
DCIDATPB
DCICLKPB
EVR26
EVR27
EVR28
PB_D[7-2]
C5801 0.1/ZFN
C5802 0.1/ZFN
C5803 PAT/ZFN
R5801 6800/J6
R5802 10K/J6
R5803 PAT/J6
R5804 PAT/J6
R5866 0/J6
R5865 PAT/J6
R5864 0/J6
R5807 0/J6
R5808 0/J6
R5811 47/J6
C5806 0.1/ZFN
R5814 PAT/J6
R5812 47/J6
R5813 47/J6
TP5801 EYF6CU
TP5802 EYF6CU
IC5801 74F04SJ-R1
IC5802 74F04SJ-R1
IC5803 74F08SJ-R1
IC5806 74F157ASJ-R1
IC5805 74F151ASJ-R1
IC5807 MC10H124MR
IC5808 PAT/MC10H124MR
IC5809 PAT/MC10H124MR
IC5810 TC7S32FTE85L
IC5811 PAT/TC7S04FTE85L
5801 LAND
5802 LAND
VTBPH
VR5801 500/VR3
CW
R5809 0/DS
R5810 PAT/J6
PAT/ZFN C5805
R5816 PAT/J6
R5817 PAT/J6
R5815 PAT/J6
SW5801 VSS0367-04TB
C5811 0.1/ZFN
+5D
-5D
+3DB
+5B
L5801 VLQ0163J8R2
L5802 VLQ0163J2R7
C5818 10P/UN
R5840 100/J6
R5845 560/J6
C5822 0.1/ZFN
C5820 0.1/ZFN
TG5801 VJR0646
R5818 390/J6
R5819 390/J6
R5820 390/J6
R5821 390/J6
R5822 390/J6
R5823 390/J6
R5824 390/J6
R5825 390/J6
R5830 0/J6
R5831 0/J6
R5832 0/J6
R5833 0/J6
R5835 0/J6
R5837 0/J6
R5838 0/J6
R5839 0/J6
PB_DAT_R_N
PB_DAT_R_P
PB_CLK_R_N
PB_CLK_R_P
PB_DAT_P_N
PB_DAT_P_P
PB_CLK_P_N
PB_CLK_P_P
ADCLKPB
CLK18
COM_INH
R5843 PAT/J6
R5844 PAT/J6
R5826 PAT/J6
R5827 PAT/J6
R5848 PAT/J6
R5849 PAT/J6
R5851 PAT/J6
R5853 PAT/J6
R5854 PAT/J6
R5857 PAT/J6
R5858 PAT/J6
R5859 PAT/J6
R5860 PAT/J6
R5861 PAT/J6
R5862 PAT/J6
R5863 PAT/J6
R5867 0/J6
C5821 PAT/ZFN
C5823 PAT/ZFN
C5824 PAT/ZFN
C5825 PAT/ZFN
VTB_CLK_N
VTB_CLK_P
VTB_D_N5
VTB_D_P5
VTB_D_N4
VTB_D_P4
VTB_D_N3
VTB_D_P3
VTB_D_N2
VTB_D_P2
VTB_D_N1
VTB_D_P1
TRICKH
VTB_D_N0
VTB_D_P0
TRICKL
PB_D[7]
PB_D[6]
PB_D[5]
PB_D[4]
PB_D[3]
PB_D[2]
C5807 0.1/ZFN
C5808 0.1/ZFN
C5809 0.1/ZFN
C5812 0.1/ZFN
C5813 0.1/ZFN
C5814 PAT/ZFN
C5815 PAT/ZFN
C5816 PAT/ZFN
C5817 PAT/ZFN
C5819 0.1/ZFN
VCC
VEE
GND

COMPONENT NAME	EQ	07/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM187	



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
5901 LAND
VTB_D_P0 (9)
5902 LAND
5903 LAND
RPCLK (3)
RPDAT (3)
(7) DCICLKPB
VS_CS (9)
R5914 47/J6
VS_CLK (9)
R5915 47/J6
VS_DATA (9)
R5916 47/J6
CLK18 (7)
5909 LAND
5910 LAND
5911 LAND
+3DB
R5901 10K/J6
R5902 10K/J6
R5903 10K/J6
C5901 0.1/ZFN
PB_D[7-1] (5)
5916 LAND
5917 LAND
ADCLKPB (7)
R5904 PAT/J6
R5913 PAT/J6
R5920 PAT/J6
R5917 0/J6
1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4
1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4
1G 2G
IC5904 T74LCX244FEL
PB_D[1] PB_D[2] PB_D[3] PB_D[4] PB_D[5] PB_D[6] PB_D[7]
IC5901 T160G22-1225
P1–P64
PBCLK (4)
PBDAT (4)
R5919 PAT/J6
R5918 0/J6
C5902 0.1/ZFN
+3DB
IC5903 S80727ANDQT1
VSS VDD OUT
D5901 MA152K-TX
R5911 470/J6
R5912 4700/J6
5912 LAND
C5912 6V33/EVV
C5904 0.1/ZFN
SEL_HSW (4)
R5905 10K/J6
R5906 15K/J6
IC5902 TC7W08FTE12L
(7) DCIDATPB
R5909 47/J6
TP5901 VJR0646
(6) PB_PWM
PB_FRP (9)
R5907 10K/J6
R5908 10K/J6
R5910 15K/J6
C5903 PAT/ZFN
5904 LAND
RECCTRL_A (9)
5905 LAND
RECCTRL_B (9)
5906 LAND
RP_HSW (9)
5907 LAND
VTB_D_N0 (9)
5908 LAND
PBH (9)
+5D
5913 LAND
+3DA
5914 LAND
5915 LAND
+5D
IC5902 TC7W08FTE12L
C5909 0.1/ZFN
+3D
IC5904 T74LCX244FEL
C5913 0.1/ZFN
V G

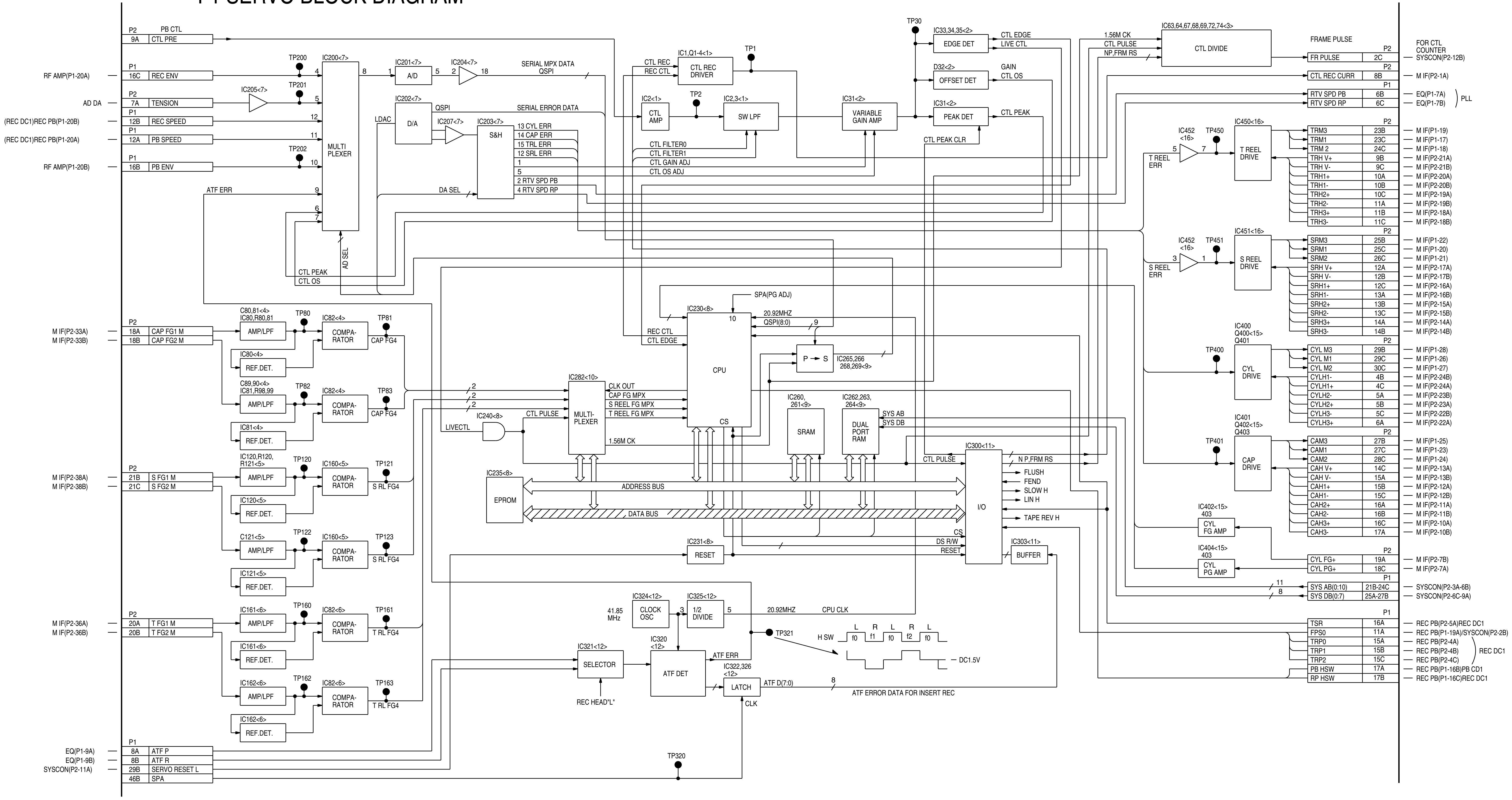
COMPONENT NAME	EQ	08/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		
	SCM188	


P5951
VJP3454B096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A GND
7A RTV_SPD_PB
8A REF_CLK
9A ATF_P
10A GND
11A RECCTRL_A
12A PB_DAT_R_N
13A PB_DAT_P_P
14A PB_CLK_P_N
15A VTB_D_P5
16A VTB_D_N4
17A VTB_D_P2
18A VTB_D_N1
19A RP_HSW
20A REC_ENV
21A V_AD
22A VS_CS
23A RF_CLK
24A
25A GND
26A PB_OUT_P
27A GND
28A RP_OUT_P
29A GND
30A +5V
31A -5V
32A DGND
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B GND
7B RTV_SPD_RP
8B GND
9B ATF_R
10B GND
11B RECCTRL_B
12B PB_CLK_R_P
13B PB_DAT_P_N
14B VTB_CLK_P
15B VTB_D_N5
16B VTB_D_P3
17B VTB_D_N2
18B VTB_D_P0
19B PB_HSW
20B PB_ENV
21B VS_CLK
22B
23B RF_DAT
24B
25B GND
26B PB_OUT_N
27B GND
28B RP_OUT_N
29B
30B +5V
31B -5V
32B DGND
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C GND
7C GND
8C GND
9C GND
10C GND
11C PB_DAT_R_P
12C PB_CLK_R_N
13C PB_CLK_P_P
14C VTB_CLK_N
15C VTB_D_P4
16C VTB_D_N3
17C VTB_D_P1
18C VTB_D_N0
19C PB_FRP
20C PBH
21C VS_DATA
22C
23C RF_EQLD_H
24C
25C GND
26C GND (PB_OUT_G)
27C GND
28C GND (PR_OUT_G)
29C GND
30C +5V
31C -5V
32C DGND
(1) (2) (3) (4) (5) (6) (7) (8)
P5952
VJP1231R
1 RPEYE
2 GND
3 MA1_R
4 MA2_R
P5953
VJP1231T
1 PBEYE
2 GND
3 MA1_P
4 MA2_P
+5V
L5951
VLP0133-T
C5953 0.1/ZFN
C5954 16V22/EVV
FL5951
VLF1016A470T
+5D
C5951 0.1/ZFN
C5952 16V47/EVV
FL5952
VLF1016A470T
C5955 0.1/ZFN
D5951 MA701A-TX
D5952 MA701A-TX
D5953 MA701A-TX
IC5951
XC62AP3002PL
C5956 0.1/ZFN
C5957 0.1/ZFN
C5958 6V47/EVV
+3DA
FL5953
VLF1016A470T
C5959 0.1/ZFN
D5954 MA701A-TX
D5955 MA701A-TX
D5956 MA701A-TX
IC5952
XC62AP3002PL
C5960 0.1/ZFN
C5962 0.1/ZFN
C5964 6V47/EVV
+3DB
D5957 MA701A-TX
D5958 MA701A-TX
D5959 MA701A-TX
IC5953
XC62AP3002PL
C5993 PAT/16V10/EVV
C5966 0.1/ZFN
C5967 6V47/EVV
C5968 0.1/ZFN
+3A
D5960 MA701A-TX
D5961 MA701A-TX
D5962 MA701A-TX
IC5954
XC62AP3002PL
C5994 PAT/16V10/EVV
C5971 0.1/ZFN
C5973 6V47/EVV
C5974 0.1/ZFN
+3B
+7.5V
L5952
VLP0133-T
C5961 16V22/EVV
C5963 0.1/ZFN
C5965 0.1/ZFN
IC5955
AN78M05
C5970 16V47/EVV
C5972 0.1/ZFN
+5A
IC5956
AN78M05
C5969 0.1/ZFN
C5975 10V470/EGE
C5977 0.1/ZFN
+5B
-5V
C5976 16V47/EVV
C5978 0.1/ZFN
FL5954
VLF1016A470T
C5980 16V47/EVV
C5982 0.1/ZFN
-5D
-7.5V
L5953
VLP0133-T
C5979 16V22/EVV
C5981 0.1/ZFN
IC5957
AN79M05
C5984 16V47/EVV
C5985 0.1/ZFN
-5A
IC5958
AN79M05
C5983 0.1/ZFN
C5986 16V47/EVV
C5987 0.1/ZFN
-5B
+12V
C5988 0.1/ZFN
FL5955
VLF1016A470T
C5989 25V10/EVV
C5990 0.1/ZFN
IC5959
NJM78L09UAT2
C5991 16V22/EVV
C5992 0.1/ZFN
+9
I G O

COMPONENT NAME	EQ	09/09
CIRCUIT BOARD NO.	MODEL NO.	
VEP85048A		

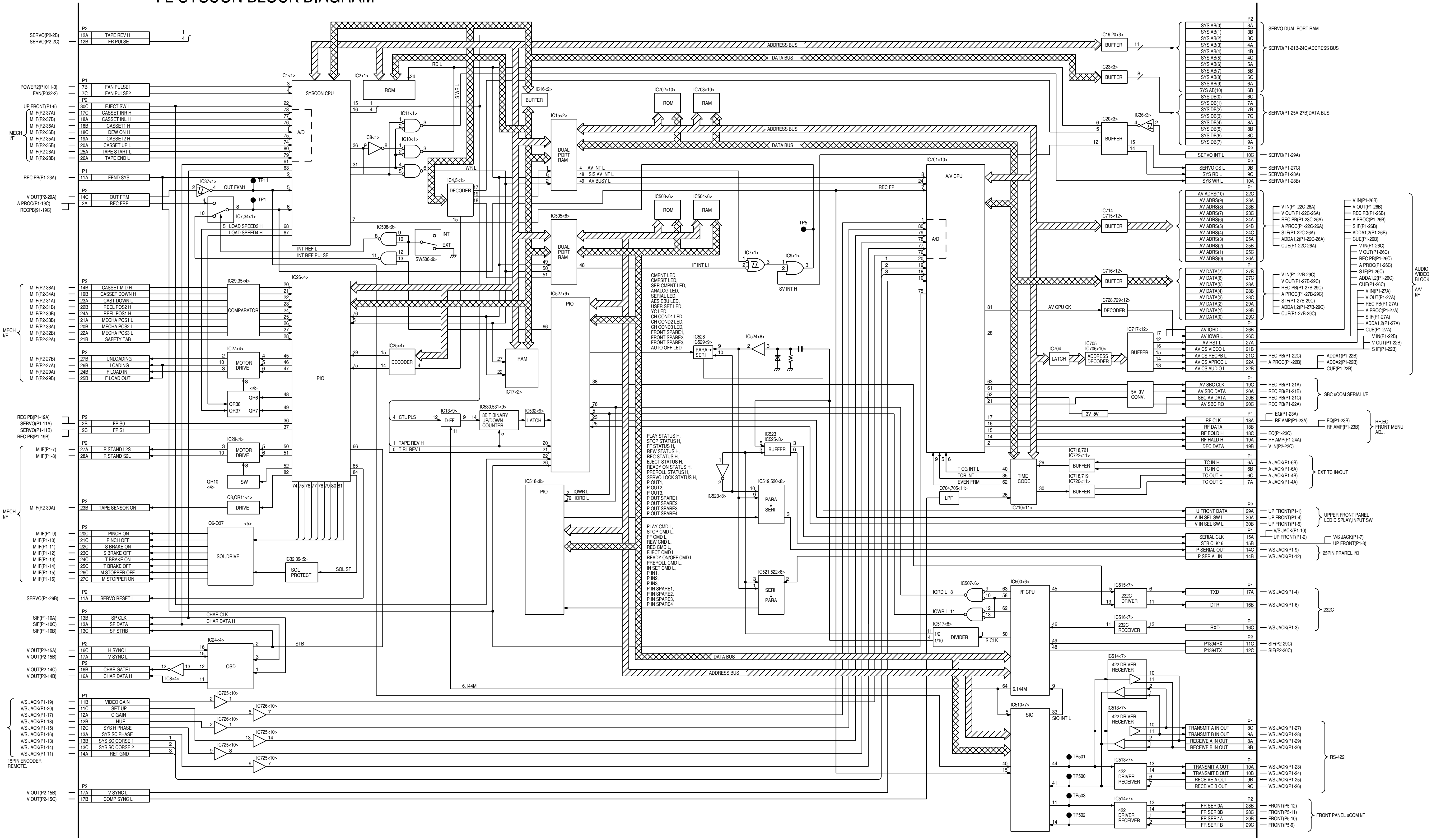
SCM189

F1 SERVO BLOCK DIAGRAM



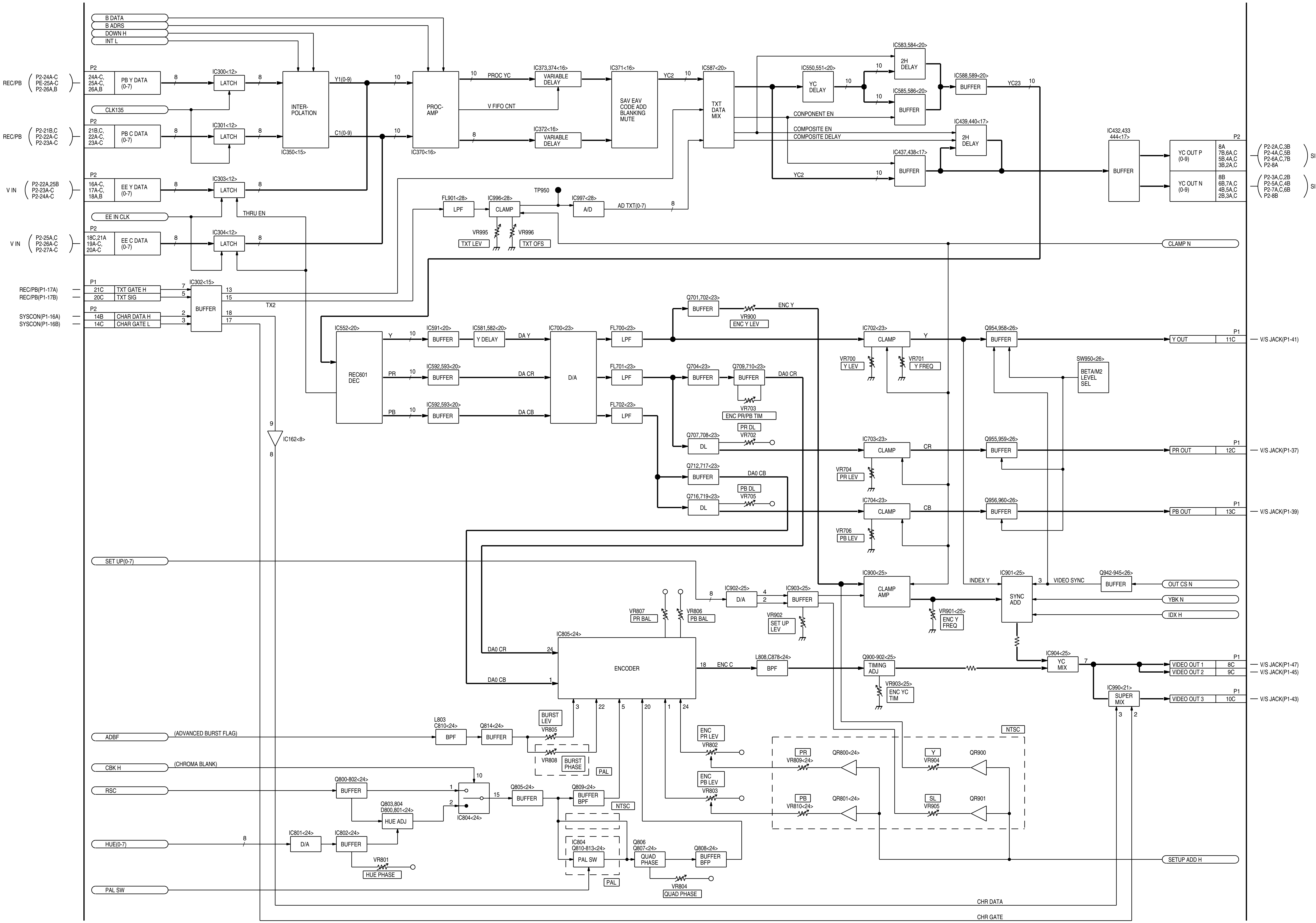
P2 9A CTL PRE PB CTL
RF AMP(P1-20A) P1 16C REC ENV
AD DA P2 7A TENSION
(REC DC1)REC PB(P1-20B) P1 12B REC SPEED
(REC DC1)REC PB(P1-20A) P1 12A PB SPEED
RF AMP(P1-20B) P1 16B PB ENV
ATF ERR
TP200
TP201
TP202
IC205<7>
IC200<7>
MULTI PLEXER
AD SEL
CTL PEAK
CTL OS
IC201<7> A/D
IC204<7>
SERIAL MPX DATA QSPI
IC202<7> D/A
LDAC
QSPI
IC207<7>
IC203<7> S&H
SERIAL ERROR DATA
13 CYL ERR
14 CAP ERR
15 TRL ERR
12 SRL ERR
2 RTV SPD PB
4 RTV SPD RP
DA SEL
CTL REC
REC CTL
IC1,Q1-4<1> CTL REC DRIVER
TP1
IC2<1> CTL AMP
TP2
IC2,3<1> SW LPF
CTL FILTER0
CTL FILTER1
CTL GAIN ADJ
CTL OS ADJ
IC31<2> VARIABLE GAIN AMP
TP30
IC33,34,35<2> EDGE DET
CTL EDGE
LIVE CTL
D32<2> OFFSET DET
GAIN
CTL OS
IC31<2> PEAK DET
CTL PEAK
CTL PEAK CLR
1.56M CK
CTL PULSE
NP,FRM RS
IC63,64,67,68,69,72,74<3> CTL DIVIDE
FRAME PULSE
P2 FR PULSE 2C
FOR CTL COUNTER SYSCON(P2-12B)
P2 CTL REC CURR 8B M IF(P2-1A)
P1 RTV SPD PB 6B EQ(P1-7A)
RTV SPD RP 6C EQ(P1-7B)
PLL
IC452<16>
TP450
T REEL ERR
IC450<16> T REEL DRIVE
P2
TRM3 23B M IF(P1-19)
TRM1 23C M IF(P1-17)
TRM 2 24C M IF(P1-18)
TRH V+ 9B M IF(P2-21A)
TRH V- 9C M IF(P2-21B)
TRH1+ 10A M IF(P2-20A)
TRH1- 10B M IF(P2-20B)
TRH2+ 10C M IF(P2-19A)
TRH2- 11A M IF(P2-19B)
TRH3+ 11B M IF(P2-18A)
TRH3- 11C M IF(P2-18B)
IC452<16>
TP451
S REEL ERR
IC451<16> S REEL DRIVE
P2
SRM3 25B M IF(P1-22)
SRM1 25C M IF(P1-20)
SRM2 26C M IF(P1-21)
SRH V+ 12A M IF(P2-17A)
SRH V- 12B M IF(P2-17B)
SRH1+ 12C M IF(P2-16A)
SRH1- 13A M IF(P2-16B)
SRH2+ 13B M IF(P2-15A)
SRH2- 13C M IF(P2-15B)
SRH3+ 14A M IF(P2-14A)
SRH3- 14B M IF(P2-14B)
IC400 Q400<15> Q401
TP400
CYL DRIVE
P2
CYL M3 29B M IF(P1-28)
CYL M1 29C M IF(P1-26)
CYL M2 30C M IF(P1-27)
CYLH1- 4B M IF(P2-24B)
CYLH1+ 4C M IF(P2-24A)
CYLH2- 5A M IF(P2-23B)
CYLH2+ 5B M IF(P2-23A)
CYLH3- 5C M IF(P2-22B)
CYLH3+ 6A M IF(P2-22A)
IC401 Q402<15> Q403
TP401
CAP DRIVE
P2
CAM3 27B M IF(P1-25)
CAM1 27C M IF(P1-23)
CAM2 28C M IF(P1-24)
CAH V+ 14C M IF(P2-13A)
CAH V- 15A M IF(P2-13B)
CAH1+ 15B M IF(P2-12A)
CAH1- 15C M IF(P2-12B)
CAH2+ 16A M IF(P2-11A)
CAH2- 16B M IF(P2-11B)
CAH3+ 16C M IF(P2-10A)
CAH3- 17A M IF(P2-10B)
IC402<15> 403 CYL FG AMP
IC404<15> 403 CYL PG AMP
P2
CYL FG+ 19A M IF(P2-7B)
CYL PG+ 18C M IF(P2-7A)
P1
SYS AB(0:10) 21B-24C SYSCON(P2-3A-6B)
SYS DB(0:7) 25A-27B SYSCON(P2-6C-9A)
11
8
P1
TSR 16A REC PB(P2-5A)REC DC1
FPS0 11A REC PB(P1-19A)/SYSCON(P2-2B)
TRP0 15A REC PB(P2-4A)
TRP1 15B REC PB(P2-4B)
TRP2 15C REC PB(P2-4C)
REC DC1
PB HSW 17A REC PB(P1-16B)PB CD1
RP HSW 17B REC PB(P1-16C)REC DC1
SPA(PG ADJ)
IC230<8> CPU
20.92MHZ
QSPI(8:0)
REC CTL
CTL EDGE
P → S
IC265,266 268,269<9>
CS
IC260, 261<9> SRAM
IC262,263, 264<9> DUAL PORT RAM
SYS AB
SYS DB
M IF(P2-33A) P2 18A CAP FG1 M
M IF(P2-33B) 18B CAP FG2 M
C80,81<4> IC80,R80,81 AMP/LPF
TP80
IC82<4> COMPA-RATOR
TP81 CAP FG4
IC80<4> REF.DET.
C89,90<4> IC81,R98,99 AMP/LPF
TP82
IC82<4> COMPA-RATOR
TP83 CAP FG4
IC81<4> REF.DET.
M IF(P2-38A) P2 21B S FG1 M
M IF(P2-38B) 21C S FG2 M
IC120,R120, R121<5> AMP/LPF
TP120
IC160<5> COMPA-RATOR
TP121 S RL FG4
IC120<5> REF.DET.
C121<5> AMP/LPF
TP122
IC160<5> COMPA-RATOR
TP123 S RL FG4
IC121<5> REF.DET.
M IF(P2-36A) P2 20A T FG1 M
M IF(P2-36B) 20B T FG2 M
IC161<6> AMP/LPF
TP160
IC82<6> COMPA-RATOR
TP161 T RL FG4
IC161<6> REF.DET.
IC162<6> AMP/LPF
TP162
IC82<6> COMPA-RATOR
TP163 T RL FG4
IC162<6> REF.DET.
IC282<10> MULTI-PLEXER
CLK OUT
CAP FG MPX
S REEL FG MPX
T REEL FG MPX
1.56M CK
IC240<8>
LIVECTL
CTL PULSE
IC235<8> EPROM
ADDRESS BUS
DATA BUS
IC300<11> I/O
CTL PULSE
N P,FRM RS
FLUSH
FEND
SLOW H
LIN H
TAPE REV H
CS
DS R/W
RESET
IC231<8> RESET
IC303<11> BUFFER
IC324<12> CLOCK OSC
41.85 MHz
IC325<12> 1/2 DIVIDE
20.92MHZ
CPU CLK
TP321
H SW
L R L R L
f0 f1 f0 f2 f0
DC1.5V
IC321<12> SELECTOR
REC HEAD"L"
IC320 <12> ATF DET
ATF ERR
IC322,326 <12> LATCH
ATF D(7:0)
CLK
ATF ERROR DATA FOR INSERT REC
TP320
EQ(P1-9A) P1 8A ATF P
EQ(P1-9B) 8B ATF R
SYSCON(P2-11A) 29B SERVO RESET L
46B SPA

F2 SYSCON BLOCK DIAGRAM



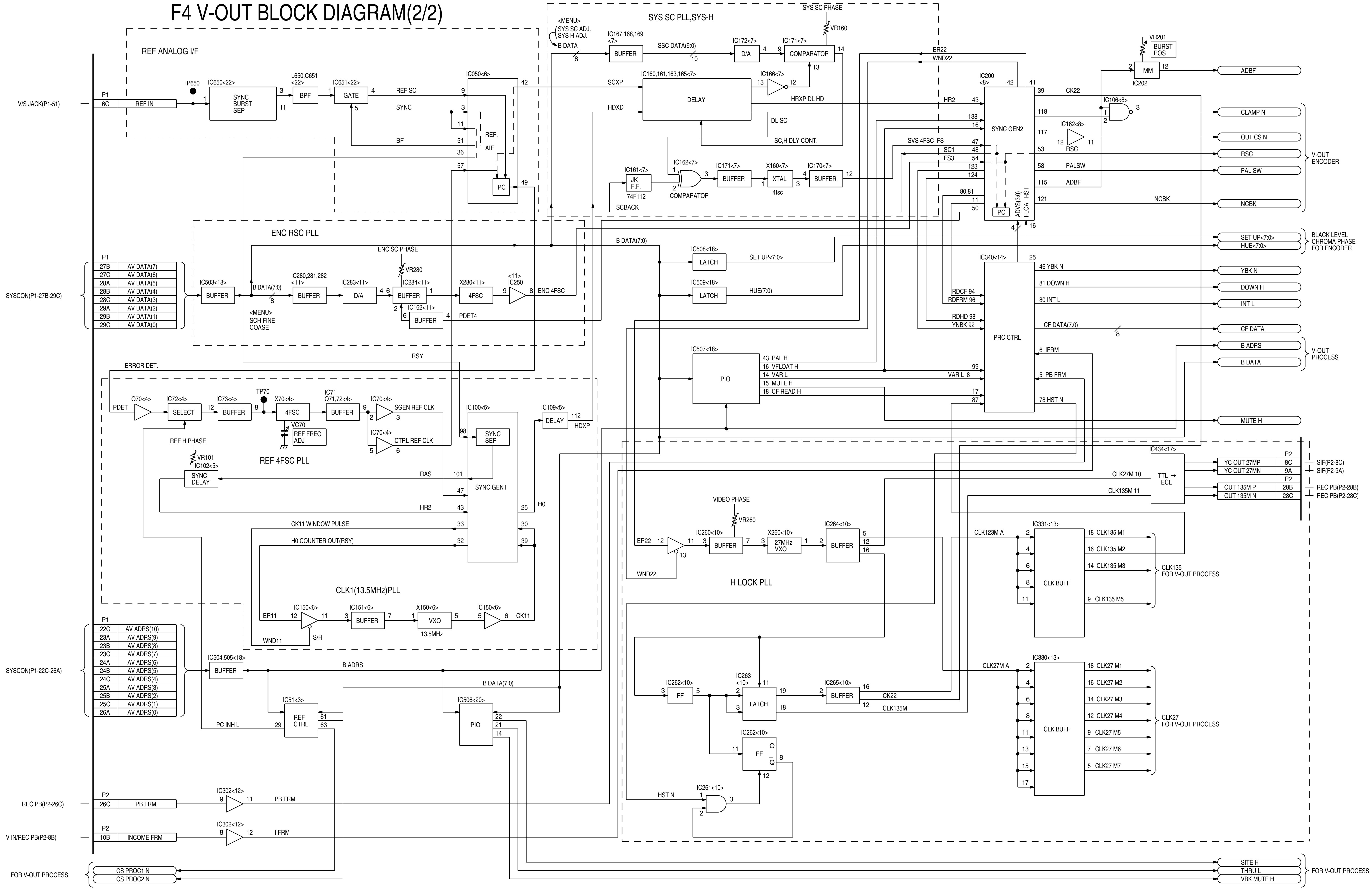
SYSCON CPU
A/D
ROM
BUFFER
DUAL PORT RAM
DECODER
RAM
PIO
COMPARATOR
MOTOR DRIVE
SW
DRIVE
SOL.DRIVE
SOL PROTECT
OSD
D-FF
8BIT BINARY UP/DOWN COUNTER
LATCH
PARA→SERI
SERI→PARA
A/V CPU
TIME CODE
LPF
I/F CPU
SIO
DIVIDER
232C DRIVER
232C RECEIVER
422 DRIVER RECEIVER
5V→3V CONV.
ADDRESS DECODER
ADDRESS BUS
DATA BUS
SERVO DUAL PORT RAM
SERVO(P1-21B-24C)ADDRESS BUS
SERVO(P1-25A-27B)DATA BUS
SBC uCOM SERIAL I/F
RF,EQ FRONT MENU ADJ.
EXT TC IN/OUT
UPPER FRONT PANEL LED DISPLAY,INPUT SW
25PIN PRAREL I/O
232C
RS-422
FRONT PANEL uCOM I/F
AUDIO /VIDEO BLOCK
A/V I/F
MECH I/F
15PIN ENCODER REMOTE.
6.144M

F4 V-OUT BLOCK DIAGRAM(1/2)

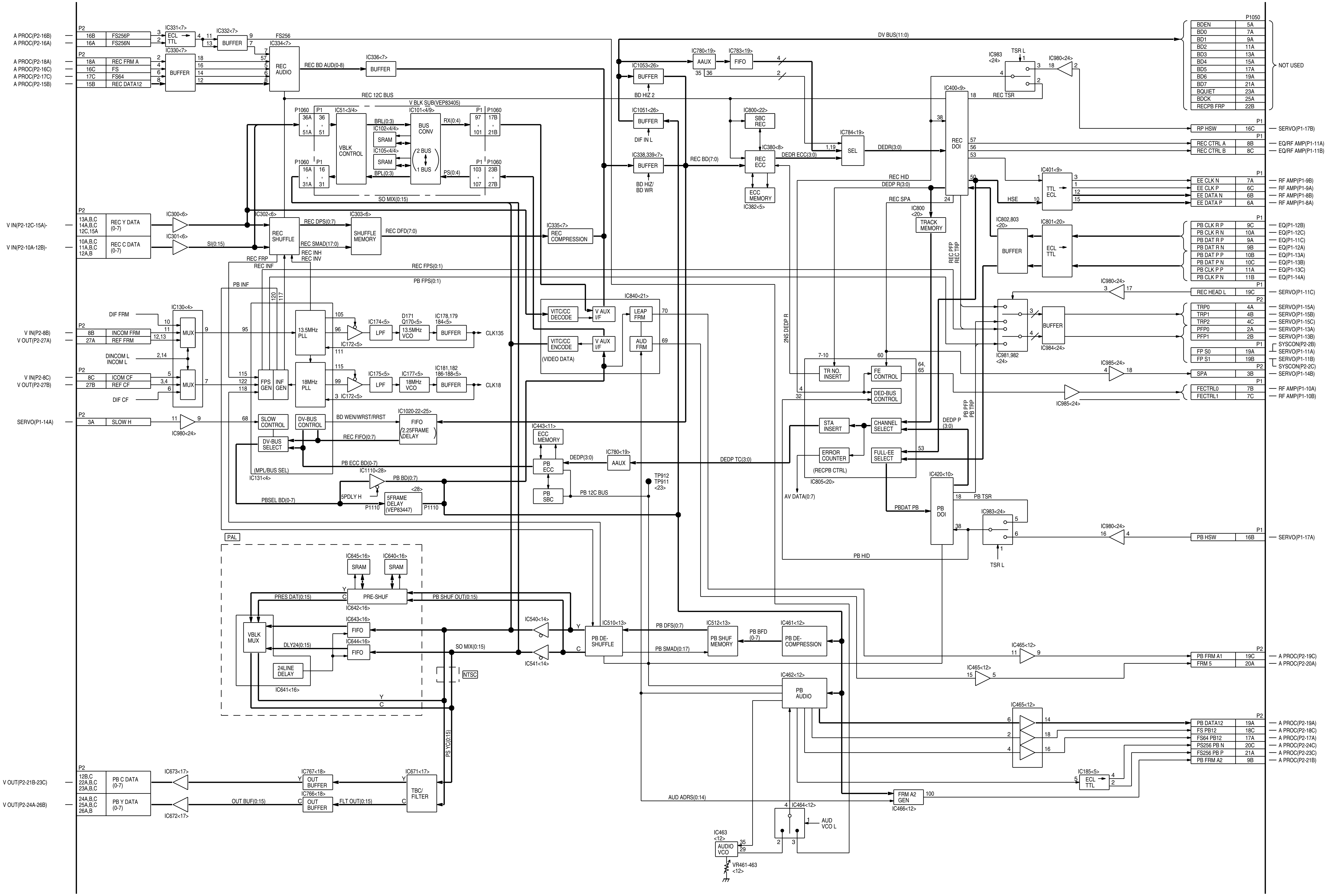


B DATA
B ADRS
DOWN H
INT L
REC/PB
P2-24A-C
PE-25A-C
P2-26A,B
P2
24A-C,
25A-C,
26A,B
PB Y DATA
(0-7)
IC300<12>
LATCH
INTER-
POLATION
IC350<15>
Y1(0-9)
C1(0-9)
PROC-
AMP
IC370<16>
PROC YC
V FIFO CNT
IC373,374<16>
VARIABLE
DELAY
IC372<16>
VARIABLE
DELAY
IC371<16>
SAV EAV
CODE ADD
BLANKING
MUTE
YC2
IC587<20>
TXT
DATA
MIX
CONPONENT EN
COMPOSITE EN
COMPOSITE DELAY
IC583,584<20>
2H
DELAY
IC550,551<20>
YC
DELAY
IC585,586<20>
BUFFER
IC588,589<20>
BUFFER
YC23
IC439,440<17>
2H
DELAY
IC437,438<17>
BUFFER
YC2
IC432,433
444<17>
BUFFER
YC OUT P
(0-9)
YC OUT N
(0-9)
P2
8A
7B,6A,C
5B,4A,C
3B,2A,C
8B
6B,7A,C
4B,5A,C
2B,3A,C
P2-2A,C,3B
P2-4A,C,5B
P2-6A,C,7B
P2-8A
P2-3A,C,2B
P2-5A,C,4B
P2-7A,C,6B
P2-8B
SIF
SIF
CLK135
REC/PB
P2-21B,C
P2-22A-C
P2-23A-C
P2
21B,C,
22A-C,
23A-C
PB C DATA
(0-7)
IC301<12>
LATCH
V IN
P2-22A,25B
P2-23A-C
P2-24A-C
P2
16A-C,
17A-C,
18A,B
EE Y DATA
(0-7)
IC303<12>
LATCH
THRU EN
EE IN CLK
V IN
P2-25A,C
P2-26A-C
P2-27A-C
P2
18C,21A
19A-C,
20A-C
EE C DATA
(0-7)
IC304<12>
LATCH
FL901<28>
LPF
IC996<28>
CLAMP
TP950
IC997<28>
A/D
AD TXT(0-7)
VR995
TXT LEV
VR996
TXT OFS
CLAMP N
REC/PB(P1-17A)
REC/PB(P1-17B)
SYSCON(P1-16A)
SYSCON(P1-16B)
P1
21C
20C
TXT GATE H
TXT SIG
P2
14B
14C
CHAR DATA H
CHAR GATE L
IC302<15>
BUFFER
TX2
IC552<20>
REC601
DEC
Y
PR
PB
IC591<20>
BUFFER
IC581,582<20>
Y DELAY
DA Y
IC592,593<20>
BUFFER
DA CR
IC592,593<20>
BUFFER
DA CB
IC700<23>
D/A
FL700<23>
LPF
FL701<23>
LPF
FL702<23>
LPF
Q701,702<23>
BUFFER
VR900
ENC Y LEV
ENC Y
Q704<23>
BUFFER
Q709,710<23>
BUFFER
DA0 CR
VR703
ENC PR/PB TIM
PR DL
VR702
Q707,708<23>
DL
Q712,717<23>
BUFFER
DA0 CB
PB DL
VR705
Q716,719<23>
DL
IC162<8>
IC702<23>
CLAMP
VR700
Y LEV
VR701
Y FREQ
IC703<23>
CLAMP
CR
VR704
PR LEV
IC704<23>
CLAMP
CB
VR706
PB LEV
Q954,958<26>
BUFFER
Q955,959<26>
BUFFER
Q956,960<26>
BUFFER
SW950<26>
BETA/M2
LEVEL
SEL
P1
Y OUT
11C
V/S JACK(P1-41)
P1
PR OUT
12C
V/S JACK(P1-37)
P1
PB OUT
13C
V/S JACK(P1-39)
SET UP(0-7)
IC902<25>
D/A
IC903<25>
BUFFER
VR902
SET UP
LEV
VR807
PR BAL
VR806
PB BAL
IC900<25>
CLAMP
AMP
VR901<25>
ENC Y
FREQ
INDEX Y
IC901<25>
SYNC
ADD
VIDEO SYNC
Q942-945<26>
BUFFER
OUT CS N
YBK N
IDX H
IC805<24>
ENCODER
DA0 CR
DA0 CB
ENC C
L808,C878<24>
BPF
Q900-902<25>
TIMING
ADJ
VR903<25>
ENC YC
TIM
IC904<25>
YC
MIX
P1
VIDEO OUT 1
VIDEO OUT 2
8C
9C
V/S JACK(P1-47)
V/S JACK(P1-45)
IC990<21>
SUPER
MIX
P1
VIDEO OUT 3
10C
V/S JACK(P1-43)
BURST
LEV
VR805
VR808
BURST
PHASE
PAL
ADBF
(ADVANCED BURST FLAG)
L803
C810<24>
BPF
Q814<24>
BUFFER
CBK H
(CHROMA BLANK)
RSC
Q800-802<24>
BUFFER
IC804<24>
Q805<24>
BUFFER
Q809<24>
BUFFER
BPF
NTSC
Q803,804
D800,801<24>
HUE ADJ
HUE(0-7)
IC801<24>
D/A
IC802<24>
BUFFER
VR801
HUE PHASE
IC804
Q810-813<24>
PAL SW
Q806
Q807<24>
QUAD
PHASE
Q808<24>
BUFFER
BFP
VR804
QUAD PHASE
PAL
PAL SW
ENC
PR LEV
VR802
ENC
PB LEV
VR803
NTSC
PR
VR809<24>
QR800<24>
Y
VR904
QR900
PB
VR810<24>
QR801<24>
SL
VR905
QR901
SETUP ADD H
CHR DATA
CHR GATE

F4 V-OUT BLOCK DIAGRAM(2/2)

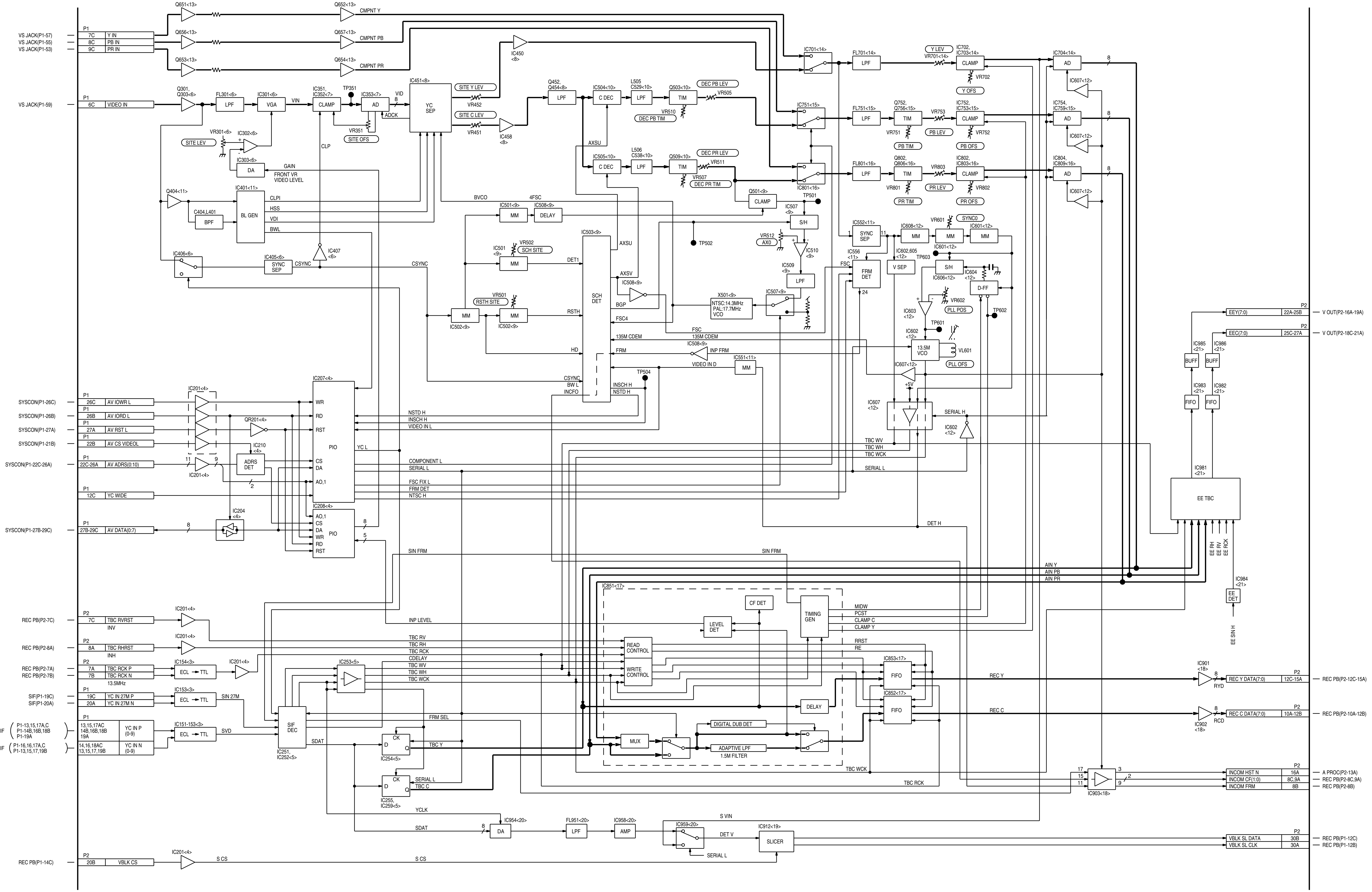

REF ANALOG I/F
V/S JACK(P1-51)
P1
6C
REF IN
TP650
IC650<22>
SYNC
BURST
SEP
L650,C651
<22>
BPF
IC651<22>
GATE
REF SC
SYNC
BF
IC050<6>
REF.
AIF
PC
SYS SC PLL,SYS-H
<MENU>
SYS SC ADJ.
SYS H ADJ.
B DATA
IC167,168,169
<7>
BUFFER
SSC DATA(9:0)
IC172<7>
D/A
IC171<7>
COMPARATOR
SYS SC PHASE
VR160
IC160,161,163,165<7>
DELAY
SCXP
HDXD
IC166<7>
HRXP DL HD
DL SC
SC,H DLY CONT.
IC161<7>
JK
F.F.
74F112
IC162<7>
COMPARATOR
IC171<7>
BUFFER
X160<7>
XTAL
4fsc
IC170<7>
BUFFER
SCBACK
ER22
WND22
IC200
<8>
SYNC GEN2
HR2
SVS 4FSC FS
SC1
FS3
80,81
PC
ADVS(3:0)
FLOAT RST
CK22
IC106<8>
IC162<8>
RSC
PALSW
ADBF
NCBK
VR201
BURST
POS
MM
IC202
ADBF
CLAMP N
OUT CS N
RSC
PAL SW
NCBK
V-OUT
ENCODER
SET UP<7:0>
HUE<7:0>
BLACK LEVEL
CHROMA PHASE
FOR ENCODER
ENC RSC PLL
P1
27B AV DATA(7)
27C AV DATA(6)
28A AV DATA(5)
28B AV DATA(4)
28C AV DATA(3)
29A AV DATA(2)
29B AV DATA(1)
29C AV DATA(0)
SYSCON(P1-27B-29C)
IC503<18>
BUFFER
B DATA(7:0)
<MENU>
SCH FINE
COASE
IC280,281,282
<11>
BUFFER
IC283<11>
D/A
ENC SC PHASE
VR280
IC284<11>
BUFFER
IC162<11>
BUFFER
PDET4
X280<11>
4FSC
<11>
IC250
ENC 4FSC
B DATA(7:0)
IC508<18>
LATCH
SET UP<7:0>
IC509<18>
LATCH
HUE(7:0)
IC340<14>
PRC CTRL
46 YBK N
81 DOWN H
80 INT L
CF DATA(7:0)
6 IFRM
5 PB FRM
78 HST N
RDCF 94
RDFRM 96
RDHD 98
YNBK 92
VAR L 8
YBK N
DOWN H
INT L
CF DATA
B ADRS
B DATA
V-OUT
PROCESS
MUTE H
RSY
ERROR DET.
PDET
Q70<4>
IC72<4>
SELECT
IC73<4>
BUFFER
TP70
X70<4>
4FSC
VC70
REF FREQ
ADJ
IC71
Q71,72<4>
BUFFER
IC70<4>
SGEN REF CLK
IC70<4>
CTRL REF CLK
REF 4FSC PLL
REF H PHASE
VR101
IC102<5>
SYNC
DELAY
IC100<5>
SYNC
SEP
SYNC GEN1
RAS
HR2
H0
CK11 WINDOW PULSE
H0 COUNTER OUT(RSY)
IC109<5>
DELAY
HDXP
IC507<18>
PIO
43 PAL H
16 VFLOAT H
14 VAR L
15 MUTE H
18 CF READ H
CLK1(13.5MHz)PLL
ER11
IC150<6>
S/H
WND11
IC151<6>
BUFFER
X150<6>
VXO
13.5MHz
IC150<6>
CK11
IC434<17>
TTL
ECL
CLK27M 10
CLK135M 11
P2
YC OUT 27MP 8C
YC OUT 27MN 9A
P2
OUT 135M P 28B
OUT 135M N 28C
SIF(P2-8C)
SIF(P2-9A)
REC PB(P2-28B)
REC PB(P2-28C)
VIDEO PHASE
VR260
IC260<10>
BUFFER
X260<10>
27MHz
VXO
IC264<10>
BUFFER
ER22
WND22
H LOCK PLL
CLK123M A
IC331<13>
CLK BUFF
18 CLK135 M1
16 CLK135 M2
14 CLK135 M3
9 CLK135 M5
CLK135
FOR V-OUT PROCESS
P1
22C AV ADRS(10)
23A AV ADRS(9)
23B AV ADRS(8)
23C AV ADRS(7)
24A AV ADRS(6)
24B AV ADRS(5)
24C AV ADRS(4)
25A AV ADRS(3)
25B AV ADRS(2)
25C AV ADRS(1)
26A AV ADRS(0)
SYSCON(P1-22C-26A)
IC504,505<18>
BUFFER
B ADRS
B DATA(7:0)
IC51<3>
REF
CTRL
PC INH L
IC506<20>
PIO
IC262<10>
FF
IC263
<10>
LATCH
IC265<10>
BUFFER
CK22
CLK135M
IC262<10>
FF
Q
Q̄
IC261<10>
HST N
CLK27M A
IC330<13>
CLK BUFF
18 CLK27 M1
16 CLK27 M2
14 CLK27 M3
12 CLK27 M4
9 CLK27 M5
7 CLK27 M6
5 CLK27 M7
CLK27
FOR V-OUT PROCESS
REC PB(P2-26C)
P2
26C
PB FRM
IC302<12>
PB FRM
V IN/REC PB(P2-8B)
P2
10B
INCOME FRM
IC302<12>
I FRM
FOR V-OUT PROCESS
CS PROC1 N
CS PROC2 N
SITE H
THRU L
VBK MUTE H
FOR V-OUT PROCESS

F5 REC PB BLOCK DIAGRAM



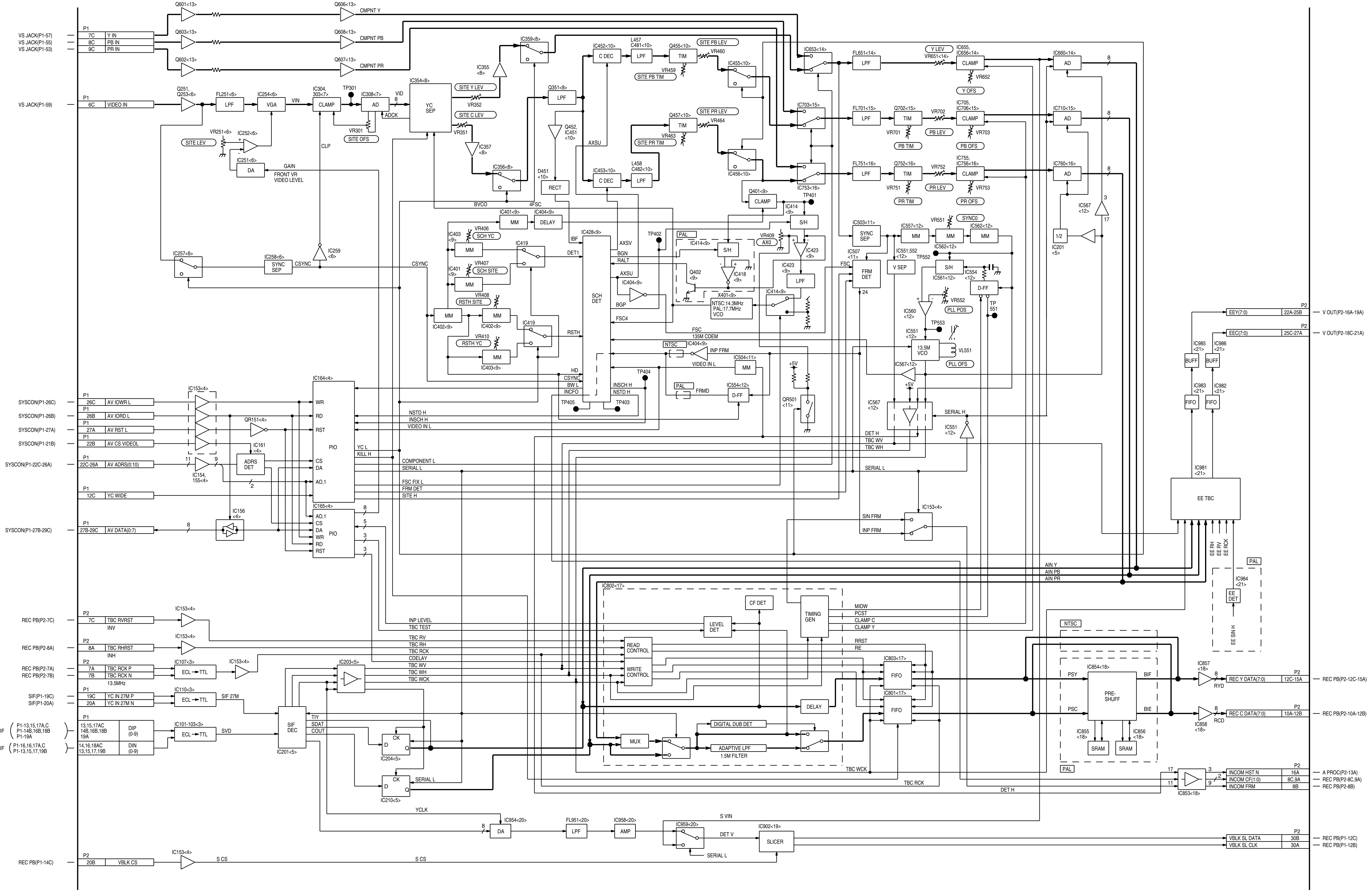
A PROC(P2-16B)
A PROC(P2-16A)
A PROC(P2-18A)
A PROC(P2-16C)
A PROC(P2-17C)
A PROC(P2-15B)
P2
16B FS256P
16A FS256N
18A REC FRM A
16C FS
17C FS64
15B REC DATA12
IC331<7>
ECL TTL
IC332<7>
BUFFER
IC330<7>
BUFFER
FS256
IC334<7>
REC AUDIO
REC BD AUD(0-8)
IC336<7>
BUFFER
REC 12C BUS
V BLK SUB(VEP83405)
DV BUS(11:0)
P1060
P1
36A 51A
36 51
IC51<3/4>
VBLK CONTROL
IC101<4/9>
BUS CONV
BRL(0:3)
IC102<4/4>
SRAM
IC105<4/4>
SRAM
2 BUS
1 BUS
BPL(0:3)
RX(0:4)
PS(0:4)
97 101
17B 21B
16A 31A
16 31
103 107
23B 27B
SO MIX(0:15)
V IN(P2-12C-15A)
V IN(P2-10A-12B)
13A,B,C 14A,B,C 12C,15A
REC Y DATA (0-7)
10A,B,C 11A,B,C 12A,B
REC C DATA (0-7)
IC300<6>
IC301<6>
SI(0:15)
IC302<6>
REC SHUFFLE
REC DPS(0:7)
REC SMAD(17:0)
IC303<6>
SHUFFLE MEMORY
REC DFD(7:0)
IC335<7>
REC COMPRESSION
REC FRP
REC INF
REC INH
REC INV
REC FPS(0:1)
PB FPS(0:1)
PB INF
V IN(P2-8B)
V OUT(P2-27A)
DIF FRM
8B INCOM FRM
27A REF FRM
IC130<4>
MUX
DINCOM L
INCOM L
V IN(P2-8C)
V OUT(P2-27B)
8C ICOM CF
27B REF CF
DIF CF
13.5MHz PLL
18MHz PLL
FPS GEN
INF GEN
IC172<5>
IC174<5>
LPF
D171 Q170<5>
13.5MHz VCO
IC178,179 184<5>
BUFFER
CLK135
IC175<5>
IC177<5>
18MHz VCO
IC181,182 186-188<5>
CLK18
SERVO(P1-14A)
3A SLOW H
IC980<24>
SLOW CONTROL
DV-BUS CONTROL
BD WEN/WRST/RRST
IC1020-22<25>
FIFO
(2.25FRAME DELAY)
REC FIFO(0:7)
DV-BUS SELECT
PB ECC BD(0-7)
(MPL/BUS SEL)
IC131<4>
IC1110<28>
PB BD(0:7)
5PDLY H
<28>
5FRAME DELAY (VEP83447)
P1110
PBSEL BD(0-7)
VITC/CC DECODE
V AUX I/F
VITC/CC ENCODE
(VIDEO DATA)
IC840<21>
LEAP FRM
AUD FRM
IC443<11>
ECC MEMORY
PB ECC
DEDP(3:0)
IC780<19>
AAUX
DEDP TC(3:0)
PB SBC
PB 12C BUS
TP912 TP911 <23>
IC780<19>
AAUX
IC783<19>
FIFO
IC1053<26>
BUFFER
BD HIZ 2
IC1051<26>
BUFFER
DIF IN L
IC338,339<7>
BUFFER
BD HIZ/ BD WR
REC BD(7:0)
IC800<22>
SBC REC
IC380<8>
REC ECC
DEDR ECC(3:0)
ECC MEMORY
IC382<5>
IC784<19>
SEL
DEDR(3:0)
REC HID
DEDP R(3:0)
REC SPA
IC800 <20>
TRACK MEMORY
IC400<9>
REC DOI
REC TSR
IC983 <24>
TSR L
IC980<24>
P1050
BDEN 5A
BD0 7A
BD1 9A
BD2 11A
BD3 13A
BD4 15A
BD5 17A
BD6 19A
BD7 21A
BQUIET 23A
BDCK 25A
RECPB FRP 22B
NOT USED
RP HSW 16C SERVO(P1-17B)
REC CTRL A 8B EQ/RF AMP(P1-11A)
REC CTRL B 8C EQ/RF AMP(P1-11B)
IC401<9>
TTL ECL
HSE
EE CLK N 7A RF AMP(P1-9B)
EE CLK P 6C RF AMP(P1-9A)
EE DATA N 6B RF AMP(P1-8B)
EE DATA P 6A RF AMP(P1-8A)
IC802,803 <20>
BUFFER
IC801<20>
ECL TTL
REC PFP
REC TRP
PB CLK R P 9C EQ(P1-12B)
PB CLK R N 10A EQ(P1-12C)
PB DAT R P 9A EQ(P1-11C)
PB DAT R N 9B EQ(P1-12A)
PB DAT P P 10B EQ(P1-13A)
PB DAT P N 10C EQ(P1-13B)
PB CLK P P 11A EQ(P1-13C)
PB CLK P N 11B EQ(P1-14A)
IC980<24>
REC HEAD L 19C SERVO(P1-11C)
2NS DEDP R
TRP0 4A SERVO(P1-15A)
TRP1 4B SERVO(P1-15B)
TRP2 4C SERVO(P1-15C)
PFP0 2A SERVO(P1-13A)
PFP1 2B SERVO(P1-13B)
BUFFER
IC981,982 <24>
IC984<24>
FP S0 19A SYSCON(P2-2B) SERVO(P1-11A)
FP S1 19B SERVO(P1-11B) SYSCON(P2-2C)
IC985<24>
SPA 3B SERVO(P1-14B)
FECTRL0 7B RF AMP(P1-10A)
FECTRL1 7C RF AMP(P1-10B)
TR NO. INSERT
FE CONTROL
DED-BUS CONTROL
STA INSERT
CHANNEL SELECT
ERROR COUNTER
FULL-EE SELECT
(RECPB CTRL)
IC805<20>
PB PFP
PB TRP
DEDP P (3:0)
AV DATA(0:7)
IC420<10>
PBDAT PB
PB DOI
PB TSR
IC983<24>
TSR L
PB HID
IC980<24>
PB HSW 16B SERVO(P1-17A)
PAL
IC645<16>
SRAM
IC640<16>
SRAM
PRE-SHUF
PRES DAT(0:15)
PB SHUF OUT(0:15)
IC642<16>
VBLK MUX
IC643<16>
FIFO
IC644<16>
FIFO
DLY24(0:15)
24LINE DELAY
IC641<16>
NTSC
SO MIX(0:15)
IC540<14>
IC541<14>
IC510<13>
PB DE-SHUFFLE
PB DFS(0:7)
PB SMAD(0:17)
IC512<13>
PB SHUF MEMORY
PB BFD (0-7)
IC461<12>
PB DE-COMPRESSION
IC462<12>
PB AUDIO
IC465<12>
PB FRM A1 19C A PROC(P2-19C)
FRM 5 20A A PROC(P2-20A)
PB DATA12 19A A PROC(P2-19A)
FS PB12 18C A PROC(P2-18C)
FS64 PB12 17A A PROC(P2-17A)
PS256 PB N 20C A PROC(P2-24C)
FS256 PB P 21A A PROC(P2-23C)
PB FRM A2 9B A PROC(P2-21B)
IC185<5>
ECL TTL
FRM A2 GEN
IC466<12>
AUD ADRS(0:14)
IC464<12>
AUD VCO L
IC463 <12>
AUDIO VCO
VR461-463 <12>
PS YC(0:15)
V OUT(P2-21B-23C)
V OUT(P2-24A-26B)
12B,C 22A,B,C 23A,B,C
PB C DATA (0-7)
24A,B,C 25A,B,C 26A,B
PB Y DATA (0-7)
IC673<17>
IC672<17>
IC767<18>
OUT BUFFER
IC766<18>
OUT BUFFER
OUT BUF(0:15)
FLT OUT(0:15)
IC671<17>
TBC/ FILTER

F6 VIDEO IN BLOCK DIAGRAM(NTSC)



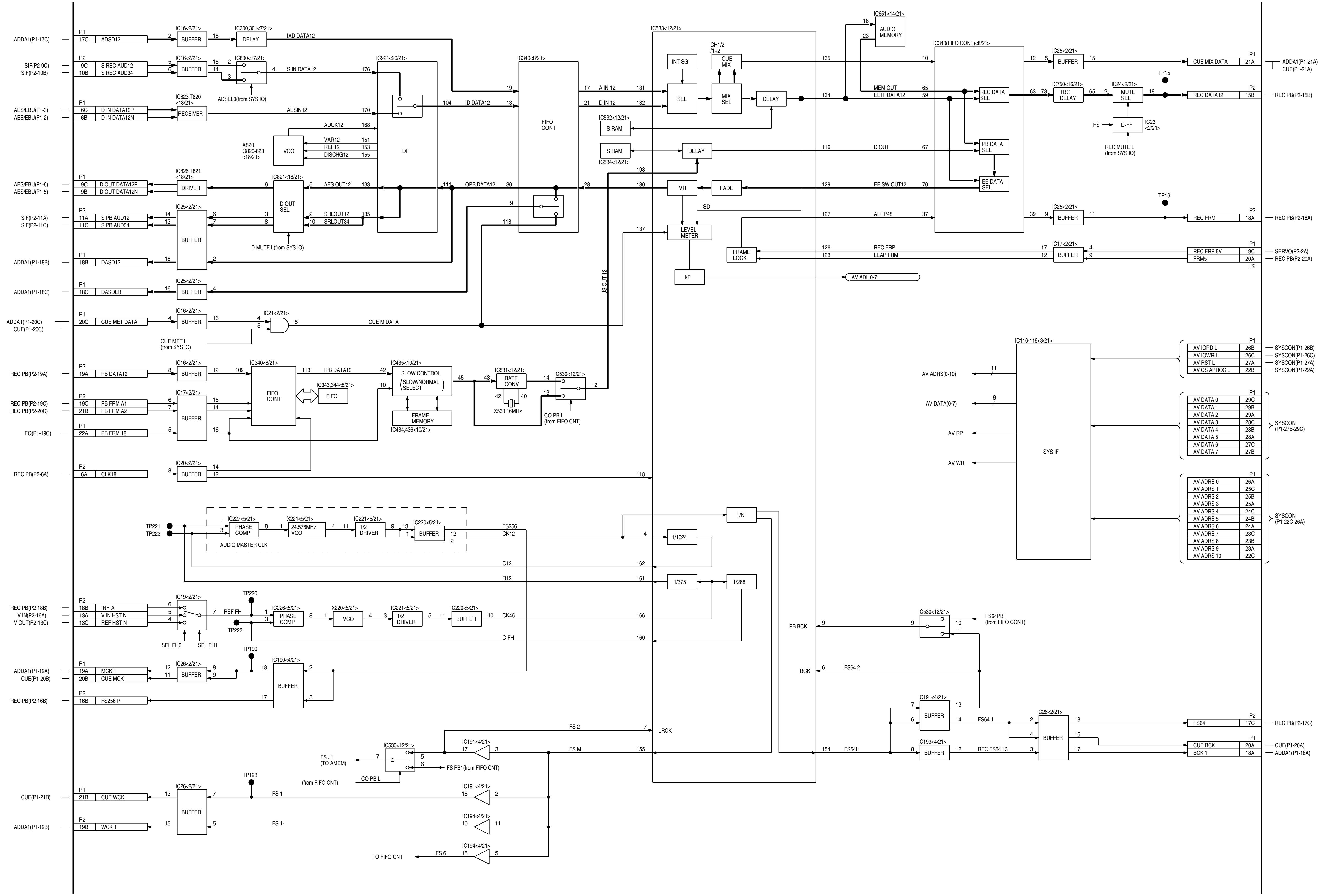
VS JACK(P1-57)
VS JACK(P1-55)
VS JACK(P1-53)
VS JACK(P1-59)
P1
7C Y IN
8C PB IN
9C PR IN
6C VIDEO IN
Q651<13>
Q652<13>
CMPNT Y
Q656<13>
Q657<13>
CMPNT PB
Q653<13>
Q654<13>
CMPNT PR
IC450 <8>
Q301, Q303<6>
FL301<6>
LPF
IC301<6>
VGA
VIN
IC351, IC352<7>
CLAMP
TP351
IC353<7>
AD
VID 8
ADCK
IC451<8>
YC SEP
SITE Y LEV
VR452
SITE C LEV
VR451
IC458 <8>
VR351
SITE OFS
CLP
VR301<6>
IC302<6>
SITE LEV
IC303<6>
DA
GAIN
FRONT VR VIDEO LEVEL
Q404<11>
C404,L401
BPF
IC401<11>
BL GEN
CLPI
HSS
VDI
BWL
BVCO
4FSC
IC406<6>
IC405<6>
SYNC SEP
CSYNC
IC407 <6>
Q452, Q454<8>
LPF
IC504<10>
C DEC
L505 C529<10>
LPF
Q503<10>
TIM
DEC PB LEV
VR505
VR510
DEC PB TIM
AXSU
IC505<10>
C DEC
L506 C538<10>
LPF
Q509<10>
TIM
DEC PR LEV
VR511
VR507
DEC PR TIM
IC501<9>
MM
IC508<9>
DELAY
IC501 <9>
VR502
SCH SITE
MM
DET1
IC503<9>
SCH DET
AXSU
AXSV
BGP
FSC4
IC508<9>
VR501
RSTH SITE
MM
IC502<9>
MM
IC502<9>
RSTH
HD
X501<9>
NTSC:14.3MHz PAL:17.7MHz VCO
IC507<9>
IC509 <9>
LPF
IC510 <9>
VR512
AX0
IC507 <9>
S/H
TP501
TP502
Q501<9>
CLAMP
FSC
135M CDEM
135M CDEM
FRM
IC508<9>
INP FRM
IC551<11>
MM
VIDEO IN D
TP504
CSYNC
BW L
INCFO
INSCH H
NSTD H
IC701<14>
FL701<14>
LPF
Y LEV
VR701<14>
IC702, IC703<14>
CLAMP
VR702
Y OFS
IC704<14>
AD
8
IC607<12>
IC751<15>
FL751<15>
LPF
Q752, Q756<15>
TIM
VR753
IC752, IC753<15>
CLAMP
VR751
PB LEV
VR752
PB TIM
PB OFS
IC754, IC759<15>
AD
IC607<12>
IC801<16>
FL801<16>
LPF
Q802, Q806<16>
TIM
VR803
IC802, IC803<16>
CLAMP
VR801
PR LEV
VR802
PR TIM
PR OFS
IC804, IC809<16>
AD
IC607<12>
IC552<11>
SYNC SEP
IC608<12>
MM
VR601
MM
SYNC0
IC601<12>
MM
IC556 <11>
FRM DET
24
IC602,605 <12>
V SEP
TP603
IC601<12>
S/H
IC606<12>
IC604 <12>
D-FF
IC603 <12>
VR602
PLL POS
TP602
TP601
IC602 <12>
13.5M VCO
VL601
PLL OFS
IC607<12>
+5V
IC607 <12>
SERIAL H
IC602 <12>
TBC WV
TBC WH
TBC WCK
SERIAL L
DET H
SYSCON(P1-26C)
SYSCON(P1-26B)
SYSCON(P1-27A)
SYSCON(P1-21B)
SYSCON(P1-22C-26A)
SYSCON(P1-27B-29C)
26C AV IOWR L
26B AV IORD L
27A AV RST L
22B AV CS VIDEOL
22C-26A AV ADRS(0:10)
12C YC WIDE
27B-29C AV DATA(0:7)
IC201<4>
QR201<4>
IC210 <4>
ADRS DET
IC201<4>
IC204 <4>
IC207<4>
WR
RD
RST
PIO
CS
DA
AO,1
YC L
NSTD H
INSCH H
VIDEO IN L
COMPONENT L
SERIAL L
FSC FIX L
FRM DET
NTSC H
IC208<4>
AO,1
CS
DA
WR
RD
RST
PIO
SIN FRM
SIN FRM
AIN Y
AIN PB
AIN PR
REC PB(P2-7C)
REC PB(P2-8A)
REC PB(P2-7A)
REC PB(P2-7B)
SIF(P1-19C)
SIF(P1-20A)
SIF
SIF
REC PB(P1-14C)
P2
7C TBC RVRST
INV
8A TBC RHRST
INH
7A TBC RCK P
7B TBC RCK N
13.5MHz
19C YC IN 27M P
20A YC IN 27M N
13,15,17AC 14B,16B,18B 19A
YC IN P (0-9)
14,16,18AC 13,15,17,19B
YC IN N (0-9)
P1-13,15,17A,C P1-14B,16B,18B P1-19A
P1-16,16,17A,C P1-13,15,17,19B
20B VBLK CS
IC154<3>
ECL → TTL
IC153<3>
ECL → TTL
IC151-153<3>
ECL → TTL
SIN 27M
SVD
IC201<4>
IC253<5>
INP LEVEL
TBC RV
TBC RH
TBC RCK
CDELAY
TBC WV
TBC WH
TBC WCK
IC251, IC252<5>
SIF DEC
FRM SEL
SDAT
IC254<5>
CK D Q
TBC Y
IC255, IC259<5>
SERIAL L
TBC C
YCLK
SDAT
IC954<20>
DA
FL951<20>
LPF
IC958<20>
AMP
IC959<20>
S VIN
DET V
SERIAL L
IC912<19>
SLICER
S CS
S CS
IC851<17>
LEVEL DET
CF DET
TIMING GEN
MIDW
PCST
CLAMP C
CLAMP Y
RRST
RE
READ CONTROL
WRITE CONTROL
DELAY
MUX
DIGITAL DUB DET
ADAPTIVE LPF
1.5M FILTER
IC853<17>
FIFO
IC852<17>
FIFO
REC Y
REC C
TBC WCK
TBC RCK
IC901 <18>
RYD
IC902 <18>
RCD
REC Y DATA(7:0) 12C-15A
REC C DATA(7:0) 10A-12B
REC PB(P2-12C-15A)
REC PB(P2-10A-12B)
IC903<18>
17 15 11 3 9 2
INCOM HST N 16A
INCOM CF(1:0) 8C,9A
INCOM FRM 8B
A PROC(P2-13A)
REC PB(P2-8C,9A)
REC PB(P2-8B)
VBLK SL DATA 30B
VBLK SL CLK 30A
REC PB(P1-12C)
REC PB(P1-12B)
EEY(7:0) 22A-25B
EEC(7:0) 25C-27A
V OUT(P2-16A-19A)
V OUT(P2-18C-21A)
IC985 <21>
BUFF
IC986 <21>
BUFF
IC983 <21>
FIFO
IC982 <21>
FIFO
IC981 <21>
EE TBC
EE RH
EE RV
EE RCK
IC984 <21>
EE DET
EE SIN H

F6 VIDEO IN BLOCK DIAGRAM(PAL)



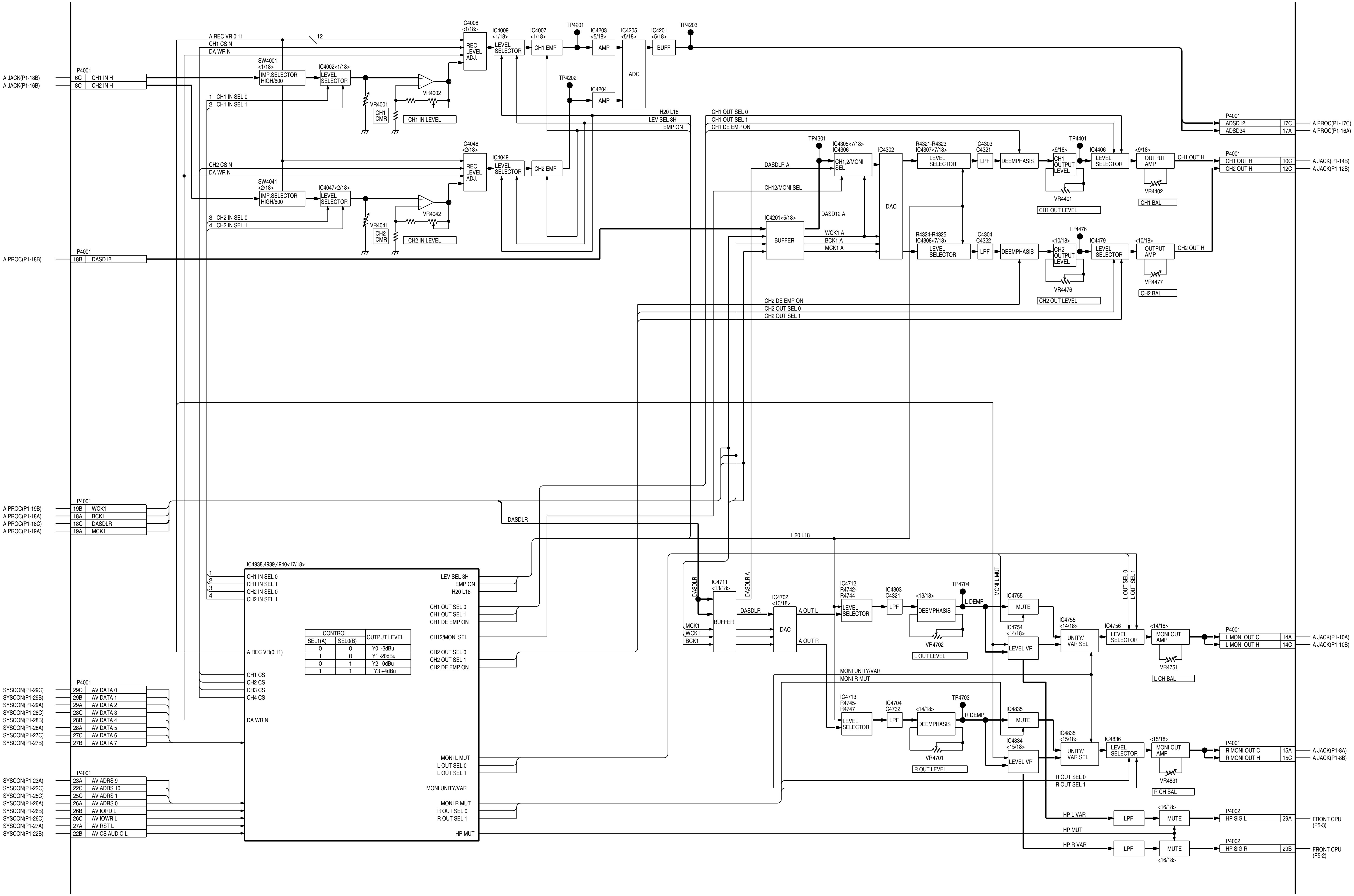
VS JACK(P1-57)
VS JACK(P1-55)
VS JACK(P1-53)
P1
7C Y IN
8C PB IN
9C PR IN
Q601<13>
Q603<13>
Q602<13>
Q606<13>
CMPNT Y
Q608<13>
CMPNT PB
Q607<13>
CMPNT PR
VS JACK(P1-59)
6C VIDEO IN
Q251, Q253<6>
FL251<6>
LPF
IC254<6>
VGA
VIN
IC304, 303<7>
CLAMP
TP301
IC308<7>
AD
VID
ADCK
IC354<8>
YC SEP
SITE Y LEV
VR352
SITE C LEV
VR351
VR301
SITE OFS
CLP
VR251<6>
SITE LEV
IC252<6>
IC251<6>
DA
GAIN
FRONT VR
VIDEO LEVEL
IC355 <8>
IC359<8>
IC357 <8>
IC356<8>
Q351<8>
Q452, IC451 <10>
D451 <10>
RECT
BVCO
4FSC
IC452<10>
C DEC
L457 C481<10>
Q455<10>
TIM
SITE PB LEV
VR460
VR459
SITE PB TIM
IC455<10>
AXSU
IC453<10>
L458 C482<10>
Q457<10>
SITE PR LEV
VR464
VR463
SITE PR TIM
IC456<10>
IC653<14>
FL651<14>
Y LEV
VR651<14>
IC655, IC656<14>
VR652
Y OFS
IC660<14>
8
IC703<15>
FL701<15>
Q702<15>
VR702
IC705, IC706<15>
VR701
PB LEV
VR703
PB TIM
PB OFS
IC710<15>
IC753<16>
FL751<16>
Q752<16>
VR752
IC755, IC756<16>
VR751
PR LEV
VR753
PR TIM
PR OFS
IC760<16>
Q401<9>
TP401
IC414 <9>
S/H
IC401<9>
MM
IC404<9>
DELAY
IC403 <9>
VR406
SCH YC
IC419
DET1
IC401 <9>
VR407
SCH SITE
VR408
RSTH SITE
IC402<9>
VR410
RSTH YC
IC403<9>
RSTH
IC428<9>
SCH DET
IBF
AXSV
BGN
RALT
AXSU
BGP
FSC4
TP402
PAL
IC414<9>
VR409
AX0
IC423 <9>
Q402 <9>
IC418 <9>
IC404<9>
X401<9>
NTSC:14.3MHz PAL:17.7MHz VCO
IC423 <9>
LPF
IC414<9>
FSC
135M CDEM
NTSC
IC404<9>
INP FRM
IC504<11>
VIDEO IN L
HD
CSYNC
BW L
INCFO
INSCH H
NSTD H
TP404
TP405
TP403
FRMD
IC554<12>
D-FF
+5V
QR501 <11>
IC503<11>
SYNC SEP
IC557<12>
VR551
SYNC0
IC562<12>
IC507 <11>
FRM DET
24
IC551,552 <12>
V SEP
TP552
IC562<12>
IC561<12>
IC554 <12>
IC560 <12>
VR552
PLL POS
TP 551
TP553
IC551 <12>
13.5M VCO
VL551
PLL OFS
IC567<12>
IC567 <12>
SERIAL H
IC551 <12>
DET H
TBC WV
TBC WH
SERIAL L
IC567 <12>
3
17
1/2
IC201 <5>
IC257<6>
IC258<6>
SYNC SEP
CSYNC
IC259 <6>
SYSCON(P1-26C)
SYSCON(P1-26B)
SYSCON(P1-27A)
SYSCON(P1-21B)
SYSCON(P1-22C-26A)
26C AV IOWR L
26B AV IORD L
27A AV RST L
22B AV CS VIDEOL
22C-26A AV ADRS(0:10)
12C YC WIDE
SYSCON(P1-27B-29C)
27B-29C AV DATA(0:7)
IC153<4>
QR151<4>
IC161 <4>
ADRS DET
IC154, 155<4>
11
9
2
IC156 <4>
IC164<4>
WR
RD
RST
PIO
CS
DA
AO,1
YC L
KILL H
NSTD H
INSCH H
VIDEO IN L
COMPONENT L
SERIAL L
FSC FIX L
FRM DET
SITE H
IC165<4>
IC153<4>
SIN FRM
INP FRM
AIN Y
AIN PB
AIN PR
IC802<17>
CF DET
TIMING GEN
LEVEL DET
MIDW
PCST
CLAMP C
CLAMP Y
RRST
RE
INP LEVEL
TBC TEST
TBC RV
TBC RH
TBC RCK
CDELAY
TBC WV
TBC WH
TBC WCK
READ CONTROL
WRITE CONTROL
IC803<17>
FIFO
IC801<17>
DELAY
MUX
DIGITAL DUB DET
ADAPTIVE LPF 1.5M FILTER
TBC WCK
TBC RCK
DET H
REC PB(P2-7C)
7C TBC RVRST
INV
REC PB(P2-8A)
8A TBC RHRST
INH
REC PB(P2-7A)
REC PB(P2-7B)
7A TBC RCK P
7B TBC RCK N
13.5MHz
IC107<3>
ECL→TTL
SIF(P1-19C)
SIF(P1-20A)
19C YC IN 27M P
20A YC IN 27M N
IC110<3>
SIF 27M
SIF
P1-13,15,17A,C P1-14B,16B,18B P1-19A
13,15,17AC 14B,16B,18B 19A
DIP (0-9)
IC101-103<3>
SVD
P1-16,16,17A,C P1-13,15,17,19B
14,16,18AC 13,15,17,19B
DIN (0-9)
IC203<5>
SIF DEC
TIY
SDAT
COUT
IC201<5>
CK
D
Q
IC204<5>
IC210<5>
SERIAL L
YCLK
IC954<20>
DA
FL951<20>
IC958<20>
AMP
S VIN
IC959<20>
DET V
SERIAL L
IC902<19>
SLICER
REC PB(P1-14C)
20B VBLK CS
S CS
P2
EEY(7:0) 22A-25B
V OUT(P2-16A-19A)
EEC(7:0) 25C-27A
V OUT(P2-18C-21A)
IC985 <21>
BUFF
IC986 <21>
IC983 <21>
FIFO
IC982 <21>
IC981 <21>
EE TBC
EE RH
EE RV
EE RCK
PAL
IC984 <21>
EE DET
EE SIN H
NTSC
IC854<18>
PSY
PRE-SHUFF
BIF
PSC
BIE
IC855 <18>
IC856 <18>
SRAM
IC857 <18>
RYD
REC Y DATA(7:0) 12C-15A
REC PB(P2-12C-15A)
IC858 <18>
RCD
REC C DATA(7:0) 10A-12B
REC PB(P2-10A-12B)
IC853<18>
INCOM HST N 16A
A PROC(P2-13A)
INCOM CF(1:0) 8C,9A
REC PB(P2-8C,9A)
INCOM FRM 8B
REC PB(P2-8B)
VBLK SL DATA 30B
REC PB(P1-12C)
VBLK SL CLK 30A
REC PB(P1-12B)

F7 A PROC BLOCK DIAGRAM



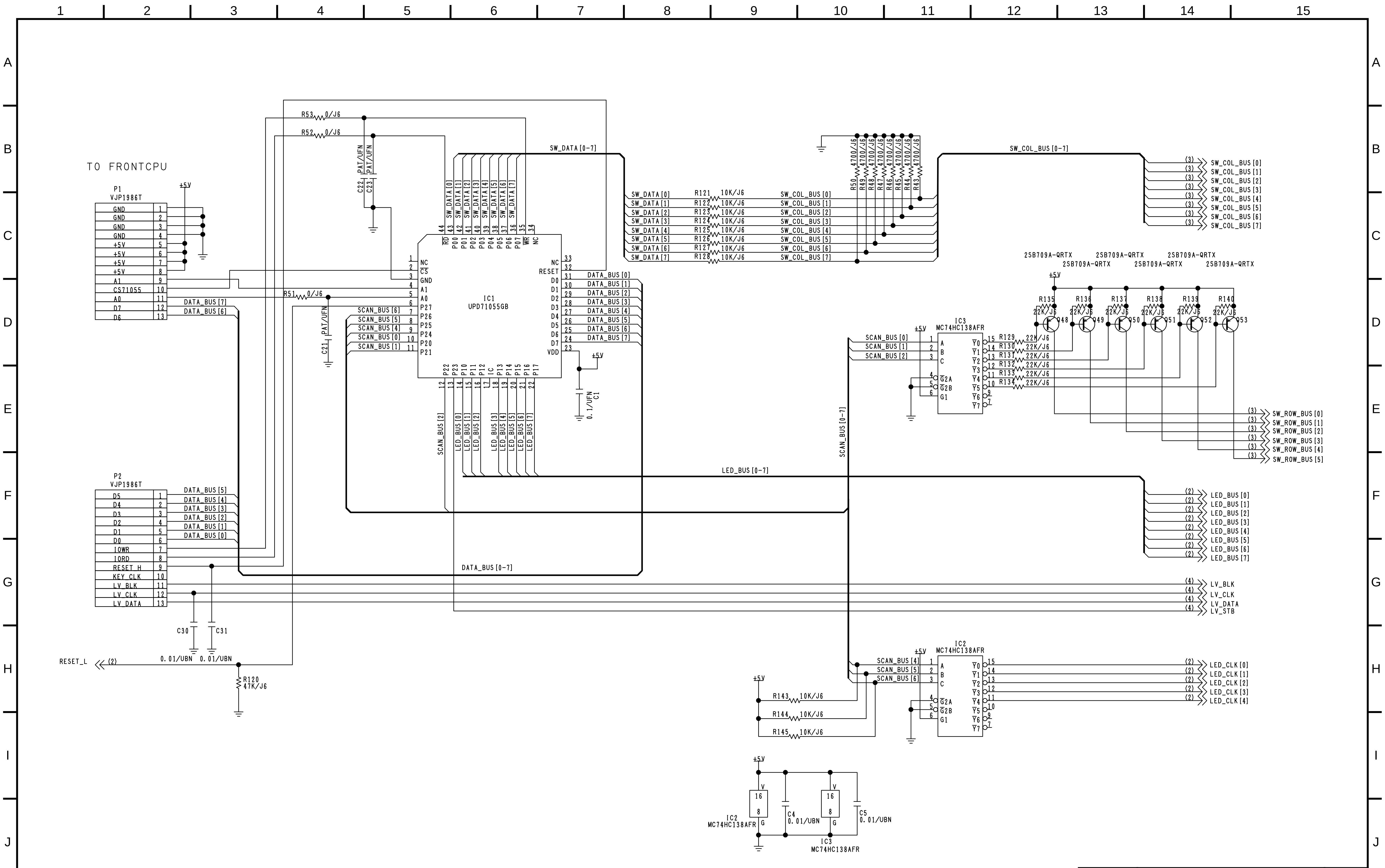
ADDA1(P1-17C)
P1
17C
ADSD12
IC16<2/21>
BUFFER
IC300,301<7/21>
DELAY
IAD DATA12
SIF(P2-9C)
SIF(P2-10B)
P2
9C
10B
S REC AUD12
S REC AUD34
IC800<17/21>
S IN DATA12
ADSEL0(from SYS IO)
IC921<20/21>
AES/EBU(P1-3)
AES/EBU(P1-2)
6C
6B
D IN DATA12P
D IN DATA12N
IC823,T820 <18/21>
RECEIVER
AESIN12
ADCK12
VAR12
REF12
DISCHG12
X820 Q820-823 <18/21>
VCO
DIF
ID DATA12
IC340<8/21>
FIFO CONT
A IN 12
D IN 12
OPB DATA12
AES/EBU(P1-6)
AES/EBU(P1-5)
9C
9B
D OUT DATA12P
D OUT DATA12N
IC826,T821 <18/21>
DRIVER
IC821<18/21>
D OUT SEL
AES OUT12
SRLOUT12
SRLOUT34
D MUTE L(from SYS IO)
SIF(P2-11A)
SIF(P2-11C)
11A
11C
S PB AUD12
S PB AUD34
IC25<2/21>
BUFFER
ADDA1(P1-18B)
18B
DASD12
ADDA1(P1-18C)
18C
DASDLR
ADDA1(P1-20C)
CUE(P1-20C)
20C
CUE MET DATA
IC21<2/21>
CUE M DATA
CUE MET L (from SYS IO)
JS OUT 12
REC PB(P2-19A)
19A
PB DATA12
FIFO CONT
PB DATA12
IC343,344<8/21>
FIFO
IC435<10/21>
SLOW CONTROL
(SLOW/NORMAL SELECT)
FRAME MEMORY
IC434,436<10/21>
IC531<12/21>
RATE CONV
X530 16MHz
IC530<12/21>
CO PB L (from FIFO CNT)
REC PB(P2-19C)
REC PB(P2-20C)
19C
21B
PB FRM A1
PB FRM A2
IC17<2/21>
EQ(P1-19C)
22A
PB FRM 18
REC PB(P2-6A)
6A
CLK18
IC20<2/21>
IC533<12/21>
INT SG
CH1/2 /1+2
CUE MIX
SEL
MIX SEL
DELAY
IC532<12/21>
S RAM
IC534<12/21>
S RAM
DELAY
VR
FADE
SD
LEVEL METER
I/F
FRAME LOCK
AV ADL 0-7
IC651<14/21>
AUDIO MEMORY
IC340(FIFO CONT)<8/21>
MEM OUT
EETHDATA12
D OUT
EE SW OUT12
AFRP48
REC FRP
LEAP FRM
REC DATA SEL
PB DATA SEL
EE DATA SEL
IC750<16/21>
TBC DELAY
IC24<2/21>
MUTE SEL
TP15
FS
D-FF
IC23 <2/21>
REC MUTE L (from SYS IO)
CUE MIX DATA
21A
ADDA1(P1-21A)
CUE(P1-21A)
REC DATA12
15B
REC PB(P2-15B)
TP16
REC FRM
18A
REC PB(P2-18A)
REC FRP 5V
FRM5
19C
20A
SERVO(P2-2A)
REC PB(P2-20A)
IC116-119<3/21>
SYS IF
AV ADRS(0-10)
AV DATA(0-7)
AV RP
AV WR
AV IORD L
AV IOWR L
AV RST L
AV CS APROC L
26B
26C
27A
22B
SYSCON(P1-26B)
SYSCON(P1-26C)
SYSCON(P1-27A)
SYSCON(P1-22A)
AV DATA 0
AV DATA 1
AV DATA 2
AV DATA 3
AV DATA 4
AV DATA 5
AV DATA 6
AV DATA 7
29C
29B
29A
28C
28B
28A
27C
27B
SYSCON (P1-27B-29C)
AV ADRS 0
AV ADRS 1
AV ADRS 2
AV ADRS 3
AV ADRS 4
AV ADRS 5
AV ADRS 6
AV ADRS 7
AV ADRS 8
AV ADRS 9
AV ADRS 10
26A
25C
25B
25A
24C
24B
24A
23C
23B
23A
22C
SYSCON (P1-22C-26A)
TP221
TP223
IC227<5/21>
PHASE COMP
X221<5/21>
24.576MHz VCO
IC221<5/21>
1/2 DRIVER
IC220<5/21>
BUFFER
AUDIO MASTER CLK
FS256
CK12
C12
R12
1/N
1/1024
1/375
1/288
REC PB(P2-18B)
V IN(P2-16A)
V OUT(P2-13C)
18B
13A
13C
INH A
V IN HST N
REF HST N
IC19<2/21>
REF FH
TP220
TP222
SEL FH0
SEL FH1
IC226<5/21>
PHASE COMP
X220<5/21>
VCO
IC221<5/21>
1/2 DRIVER
IC220<5/21>
BUFFER
CK45
C FH
PB BCK
BCK
LRCK
IC530<12/21>
FS64PBI (from FIFO CONT)
FS64 2
TP190
ADDA1(P1-19A)
CUE(P1-20B)
19A
20B
MCK 1
CUE MCK
IC26<2/21>
IC190<4/21>
BUFFER
REC PB(P2-16B)
16B
FS256 P
FS 2
FS M
IC191<4/21>
IC193<4/21>
BUFFER
FS64 1
REC FS64 13
FS64H
IC26<2/21>
BUFFER
FS64
17C
REC PB(P2-17C)
CUE BCK
BCK 1
20A
18A
CUE(P1-20A)
ADDA1(P1-18A)
IC530<12/21>
FS J1 (TO AMEM)
FS PB1(from FIFO CNT)
(from FIFO CNT)
CO PB L
TP193
CUE(P1-21B)
21B
CUE WCK
ADDA1(P1-19B)
19B
WCK 1
FS 1
FS 1-
IC191<4/21>
IC194<4/21>
IC194<4/21>
TO FIFO CNT
FS 6

F8 AUDIO AD/DA BLOCK DIAGRAM

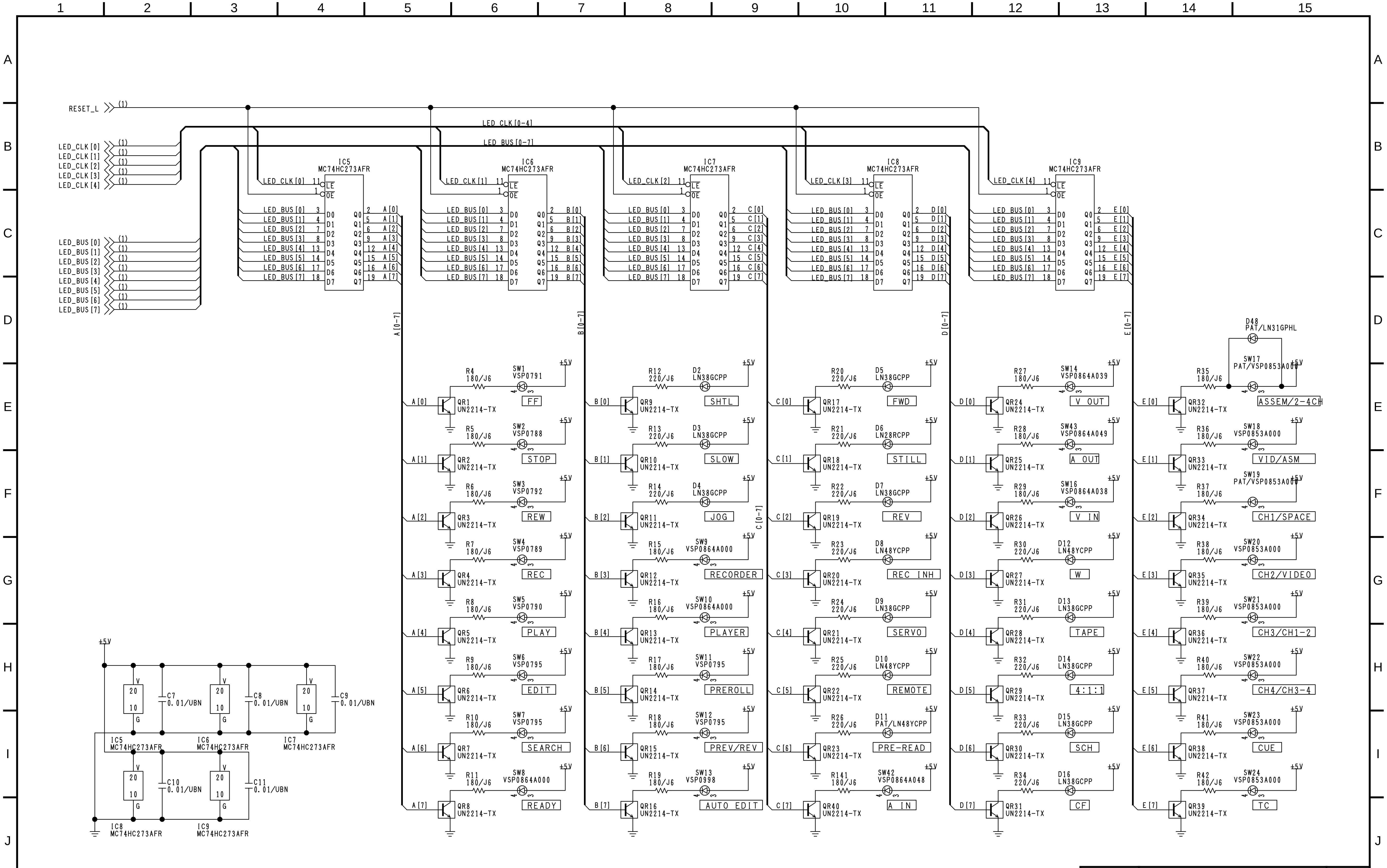


A REC VR 0:11
12
CH1 CS N
DA WR N
IC4008
<1/18>
REC LEVEL ADJ.
IC4009
<1/18>
LEVEL SELECTOR
IC4007
<1/18>
CH1 EMP
TP4201
IC4203
<5/18>
AMP
IC4205
<5/18>
ADC
IC4201
<5/18>
BUFF
TP4203
TP4202
IC4204
AMP
A JACK(P1-18B)
A JACK(P1-16B)
P4001
6C
CH1 IN H
8C
CH2 IN H
SW4001
<1/18>
IMP.SELECTOR HIGH/600
IC4002<1/18>
LEVEL SELECTOR
VR4002
VR4001
CH1 CMR
CH1 IN LEVEL
1 CH1 IN SEL 0
2 CH1 IN SEL 1
H20 L18
LEV SEL 3H
EMP ON
CH1 OUT SEL 0
CH1 OUT SEL 1
CH1 DE EMP ON
P4001
ADSD12
17C
ADSD34
17A
A PROC(P1-17C)
A PROC(P1-16A)
IC4048
<2/18>
REC LEVEL ADJ.
IC4049
LEVEL SELECTOR
CH2 EMP
CH2 CS N
DA WR N
SW4041
<2/18>
IMP.SELECTOR HIGH/600
IC4047<2/18>
LEVEL SELECTOR
VR4042
VR4041
CH2 CMR
CH2 IN LEVEL
3 CH2 IN SEL 0
4 CH2 IN SEL 1
TP4301
DASDLR A
IC4305<7/18>
IC4306
CH1,2/MONI SEL
IC4302
DAC
R4321-R4323
IC4307<7/18>
LEVEL SELECTOR
IC4303
C4321
LPF
DEEMPHASIS
<9/18>
CH1 OUTPUT LEVEL
TP4401
IC4406
LEVEL SELECTOR
<9/18>
OUTPUT AMP
CH1 OUT H
P4001
CH1 OUT H
10C
CH2 OUT H
12C
A JACK(P1-14B)
A JACK(P1-12B)
VR4401
VR4402
CH1 OUT LEVEL
CH1 BAL
CH12/MONI SEL
DASD12 A
IC4201<5/18>
BUFFER
WCK1 A
BCK1 A
MCK1 A
R4324-R4325
IC4308<7/18>
LEVEL SELECTOR
IC4304
C4322
LPF
DEEMPHASIS
<10/18>
CH2 OUTPUT LEVEL
TP4476
IC4479
LEVEL SELECTOR
<10/18>
OUTPUT AMP
CH2 OUT H
VR4476
VR4477
CH2 OUT LEVEL
CH2 BAL
P4001
18B
DASD12
A PROC(P1-18B)
CH2 DE EMP ON
CH2 OUT SEL 0
CH2 OUT SEL 1
A PROC(P1-19B)
A PROC(P1-18A)
A PROC(P1-18C)
A PROC(P1-19A)
P4001
19B
WCK1
18A
BCK1
18C
DASDLR
19A
MCK1
DASDLR
H20 L18
IC4938,4939,4940<17/18>
1
2
3
4
CH1 IN SEL 0
CH1 IN SEL 1
CH2 IN SEL 0
CH2 IN SEL 1
A REC VR(0:11)
CH1 CS
CH2 CS
CH3 CS
CH4 CS
DA WR N
LEV SEL 3H
EMP ON
H20 L18
CH1 OUT SEL 0
CH1 OUT SEL 1
CH1 DE EMP ON
CH12/MONI SEL
CH2 OUT SEL 0
CH2 OUT SEL 1
CH2 DE EMP ON
MONI L MUT
L OUT SEL 0
L OUT SEL 1
MONI UNITY/VAR
MONI R MUT
R OUT SEL 0
R OUT SEL 1
HP MUT
SYSCON(P1-29C)
SYSCON(P1-29B)
SYSCON(P1-29A)
SYSCON(P1-28C)
SYSCON(P1-28B)
SYSCON(P1-28A)
SYSCON(P1-27C)
SYSCON(P1-27B)
P4001
29C
AV DATA 0
29B
AV DATA 1
29A
AV DATA 2
28C
AV DATA 3
28B
AV DATA 4
28A
AV DATA 5
27C
AV DATA 6
27B
AV DATA 7
SYSCON(P1-23A)
SYSCON(P1-22C)
SYSCON(P1-25C)
SYSCON(P1-26A)
SYSCON(P1-26B)
SYSCON(P1-26C)
SYSCON(P1-27A)
SYSCON(P1-22B)
P4001
23A
AV ADRS 9
22C
AV ADRS 10
25C
AV ADRS 1
26A
AV ADRS 0
26B
AV IORD L
26C
AV IOWR L
27A
AV RST L
22B
AV CS AUDIO L
DASDLR
DASDLR A
IC4711
<13/18>
BUFFER
MCK1
WCK1
BCK1
DASDLR
IC4702
<13/18>
DAC
A OUT L
A OUT R
IC4712
R4742-
R4744
LEVEL SELECTOR
IC4303
C4321
LPF
<13/18>
DEEMPHASIS
TP4704
L DEMP
VR4702
L OUT LEVEL
MONI L MUT
IC4755
MUTE
IC4754
<14/18>
LEVEL VR
IC4755
<14/18>
UNITY/ VAR SEL
L OUT SEL 0
L OUT SEL 1
IC4756
LEVEL SELECTOR
<14/18>
MONI OUT AMP
VR4751
L CH BAL
P4001
L MONI OUT C
14A
L MONI OUT H
14C
A JACK(P1-10A)
A JACK(P1-10B)
MONI UNITY/VAR
MONI R MUT
IC4713
R4745-
R4747
LEVEL SELECTOR
IC4704
C4732
LPF
<14/18>
DEEMPHASIS
TP4703
R DEMP
VR4701
R OUT LEVEL
IC4835
MUTE
IC4834
<15/18>
LEVEL VR
IC4835
<15/18>
UNITY/ VAR SEL
IC4836
LEVEL SELECTOR
<15/18>
MONI OUT AMP
VR4831
R CH BAL
P4001
R MONI OUT C
15A
R MONI OUT H
15C
A JACK(P1-8A)
A JACK(P1-8B)
R OUT SEL 0
R OUT SEL 1
HP L VAR
LPF
<16/18>
MUTE
P4002
HP SIG L
29A
FRONT CPU (P5-3)
HP MUT
HP R VAR
LPF
MUTE
<16/18>
P4002
HP SIG R
29B
FRONT CPU (P5-2)

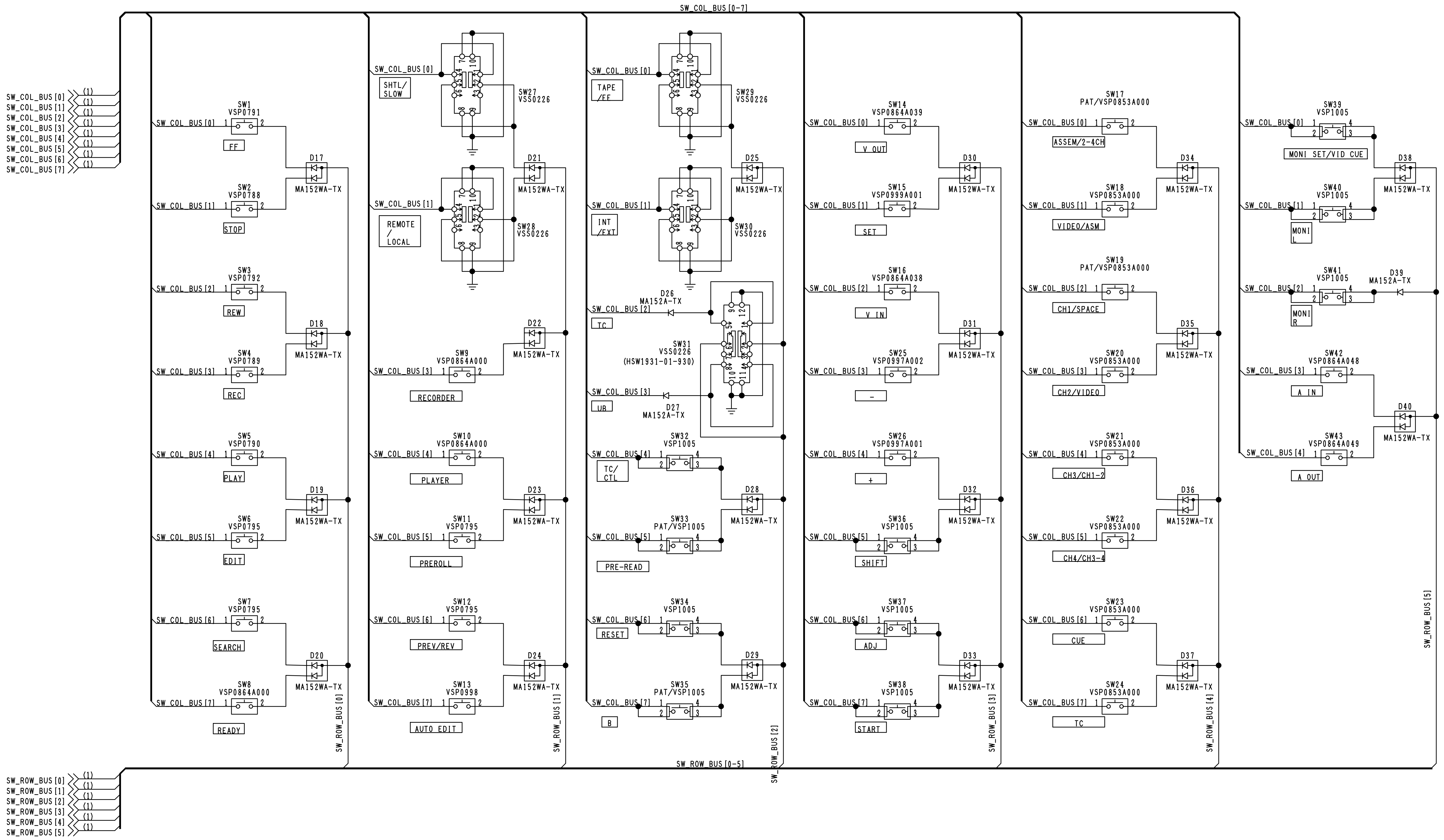
CONTROL		OUTPUT LEVEL
SEL1(A)	SEL0(B)	
0	0	Y0 -3dBu
1	0	Y1 -20dBu
0	1	Y2 0dBu
1	1	Y3 +4dBu


TO FRONTCPU
P1
VJP1986T
GND
GND
GND
GND
+5V
+5V
+5V
+5V
A1
CS71055
A0
D7
D6
P2
VJP1986T
D5
D4
D3
D2
D1
D0
IOWR
IORD
RESET H
KEY CLK
LV BLK
LV CLK
LV DATA
DATA_BUS [7]
DATA_BUS [6]
DATA_BUS [5]
DATA_BUS [4]
DATA_BUS [3]
DATA_BUS [2]
DATA_BUS [1]
DATA_BUS [0]
DATA_BUS [0-7]
R53 0/J6
R52 0/J6
R51 0/J6
C22 PAT/UFN
C23 PAT/UFN
C21 PAT/UFN
C1 0.1/UFN
C30 0.01/UBN
C31 0.01/UBN
R120 47K/J6
RESET_L
(2)
IC1
UPD71055GB
NC
CS
GND
A1
A0
P27
P26
P25
P24
P20
P21
RESET
D0
D1
D2
D3
D4
D5
D6
D7
VDD
RD
P00
P01
P02
P03
P04
P05
P06
P07
WR
P22
P23
P10
P11
P12
IC
P13
P14
P15
P16
P17
SW_DATA [0-7]
SW_DATA [0]
SW_DATA [1]
SW_DATA [2]
SW_DATA [3]
SW_DATA [4]
SW_DATA [5]
SW_DATA [6]
SW_DATA [7]
SCAN_BUS [6]
SCAN_BUS [5]
SCAN_BUS [4]
SCAN_BUS [0]
SCAN_BUS [1]
SCAN_BUS [2]
SCAN_BUS [0-7]
LED_BUS [0]
LED_BUS [1]
LED_BUS [2]
LED_BUS [3]
LED_BUS [4]
LED_BUS [5]
LED_BUS [6]
LED_BUS [7]
LED_BUS [0-7]
R121 10K/J6
R122 10K/J6
R123 10K/J6
R124 10K/J6
R125 10K/J6
R126 10K/J6
R127 10K/J6
R128 10K/J6
R50 4700/J6
R49 4700/J6
R48 4700/J6
R47 4700/J6
R46 4700/J6
R45 4700/J6
R44 4700/J6
R43 4700/J6
SW_COL_BUS [0]
SW_COL_BUS [1]
SW_COL_BUS [2]
SW_COL_BUS [3]
SW_COL_BUS [4]
SW_COL_BUS [5]
SW_COL_BUS [6]
SW_COL_BUS [7]
SW_COL_BUS [0-7]
(3)
2SB709A-QRTX
+5V
R135 22K/J6
R136 22K/J6
R137 22K/J6
R138 22K/J6
R139 22K/J6
R140 22K/J6
Q48
Q49
Q50
Q51
Q52
Q53
IC3
MC74HC138AFR
A
B
C
G2A
G2B
G1
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
R129 22K/J6
R130 22K/J6
R131 22K/J6
R132 22K/J6
R133 22K/J6
R134 22K/J6
SW_ROW_BUS [0]
SW_ROW_BUS [1]
SW_ROW_BUS [2]
SW_ROW_BUS [3]
SW_ROW_BUS [4]
SW_ROW_BUS [5]
(4)
LV_BLK
LV_CLK
LV_DATA
LV_STB
IC2
MC74HC138AFR
SCAN_BUS [4]
SCAN_BUS [5]
SCAN_BUS [6]
R143 10K/J6
R144 10K/J6
R145 10K/J6
LED_CLK [0]
LED_CLK [1]
LED_CLK [2]
LED_CLK [3]
LED_CLK [4]
C4 0.01/UBN
C5 0.01/UBN
IC2 MC74HC138AFR
IC3 MC74HC138AFR
V
16
8
G

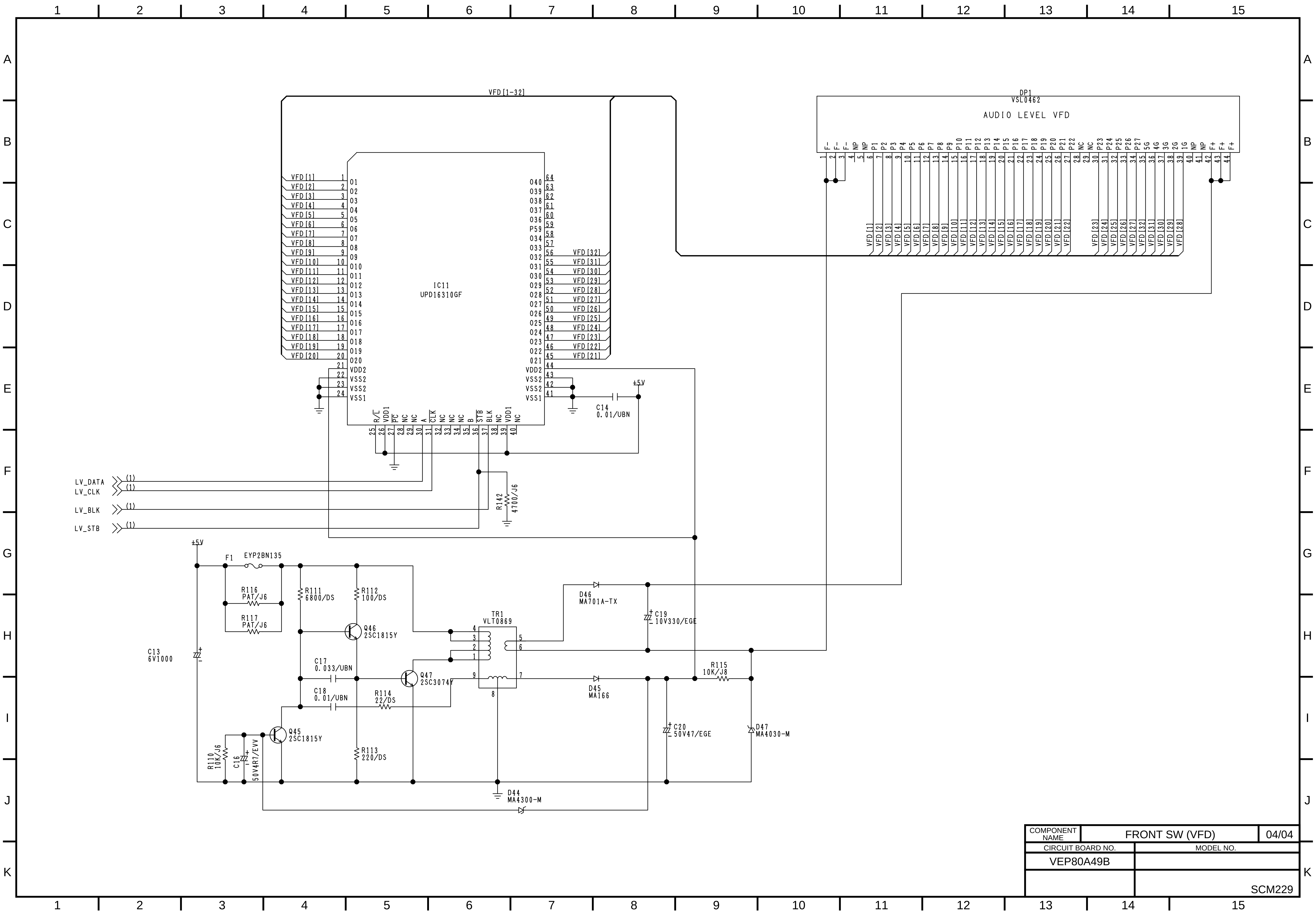
COMPONENT NAME	FRONT SW (CONTROL)	01/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A49B		
	SCM226	


RESET_L (1)
LED_CLK[0] (1)
LED_CLK[1] (1)
LED_CLK[2] (1)
LED_CLK[3] (1)
LED_CLK[4] (1)
LED_BUS[0] (1)
LED_BUS[1] (1)
LED_BUS[2] (1)
LED_BUS[3] (1)
LED_BUS[4] (1)
LED_BUS[5] (1)
LED_BUS[6] (1)
LED_BUS[7] (1)
LED_CLK[0-4]
LED_BUS[0-7]
IC5 MC74HC273AFR
IC6 MC74HC273AFR
IC7 MC74HC273AFR
IC8 MC74HC273AFR
IC9 MC74HC273AFR
LE
OE
D0 D1 D2 D3 D4 D5 D6 D7
Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7
A[0-7]
B[0-7]
C[0-7]
D[0-7]
E[0-7]
+5V
QR1 UN2214-TX R4 180/J6 SW1 VSP0791 FF
QR2 UN2214-TX R5 180/J6 SW2 VSP0788 STOP
QR3 UN2214-TX R6 180/J6 SW3 VSP0792 REW
QR4 UN2214-TX R7 180/J6 SW4 VSP0789 REC
QR5 UN2214-TX R8 180/J6 SW5 VSP0790 PLAY
QR6 UN2214-TX R9 180/J6 SW6 VSP0795 EDIT
QR7 UN2214-TX R10 180/J6 SW7 VSP0795 SEARCH
QR8 UN2214-TX R11 180/J6 SW8 VSP0864A000 READY
QR9 UN2214-TX R12 220/J6 D2 LN38GCPP SHTL
QR10 UN2214-TX R13 220/J6 D3 LN38GCPP SLOW
QR11 UN2214-TX R14 220/J6 D4 LN38GCPP JOG
QR12 UN2214-TX R15 180/J6 SW9 VSP0864A000 RECORDER
QR13 UN2214-TX R16 180/J6 SW10 VSP0864A000 PLAYER
QR14 UN2214-TX R17 180/J6 SW11 VSP0795 PREROLL
QR15 UN2214-TX R18 180/J6 SW12 VSP0795 PREV/REV
QR16 UN2214-TX R19 180/J6 SW13 VSP0998 AUTO EDIT
QR17 UN2214-TX R20 220/J6 D5 LN38GCPP FWD
QR18 UN2214-TX R21 220/J6 D6 LN28RCPP STILL
QR19 UN2214-TX R22 220/J6 D7 LN38GCPP REV
QR20 UN2214-TX R23 220/J6 D8 LN48YCPP REC INH
QR21 UN2214-TX R24 220/J6 D9 LN38GCPP SERVO
QR22 UN2214-TX R25 220/J6 D10 LN48YCPP REMOTE
QR23 UN2214-TX R26 220/J6 D11 PAT/LN48YCPP PRE-READ
QR40 UN2214-TX R141 180/J6 SW42 VSP0864A048 A IN
QR24 UN2214-TX R27 180/J6 SW14 VSP0864A039 V OUT
QR25 UN2214-TX R28 180/J6 SW43 VSP0864A049 A OUT
QR26 UN2214-TX R29 180/J6 SW16 VSP0864A038 V IN
QR27 UN2214-TX R30 220/J6 D12 LN48YCPP W
QR28 UN2214-TX R31 220/J6 D13 LN38GCPP TAPE
QR29 UN2214-TX R32 220/J6 D14 LN38GCPP 4:1:1
QR30 UN2214-TX R33 220/J6 D15 LN38GCPP SCH
QR31 UN2214-TX R34 220/J6 D16 LN38GCPP CF
D48 PAT/LN31GPHL
QR32 UN2214-TX R35 180/J6 SW17 PAT/VSP0853A000 ASSEM/2-4CH
QR33 UN2214-TX R36 180/J6 SW18 VSP0853A000 VID/ASM
QR34 UN2214-TX R37 180/J6 SW19 PAT/VSP0853A000 CH1/SPACE
QR35 UN2214-TX R38 180/J6 SW20 VSP0853A000 CH2/VIDEO
QR36 UN2214-TX R39 180/J6 SW21 VSP0853A000 CH3/CH1-2
QR37 UN2214-TX R40 180/J6 SW22 VSP0853A000 CH4/CH3-4
QR38 UN2214-TX R41 180/J6 SW23 VSP0853A000 CUE
QR39 UN2214-TX R42 180/J6 SW24 VSP0853A000 TC
C7 0.01/UBN
C8 0.01/UBN
C9 0.01/UBN
C10 0.01/UBN
C11 0.01/UBN
IC5 MC74HC273AFR
IC6 MC74HC273AFR
IC7 MC74HC273AFR
IC8 MC74HC273AFR
IC9 MC74HC273AFR
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

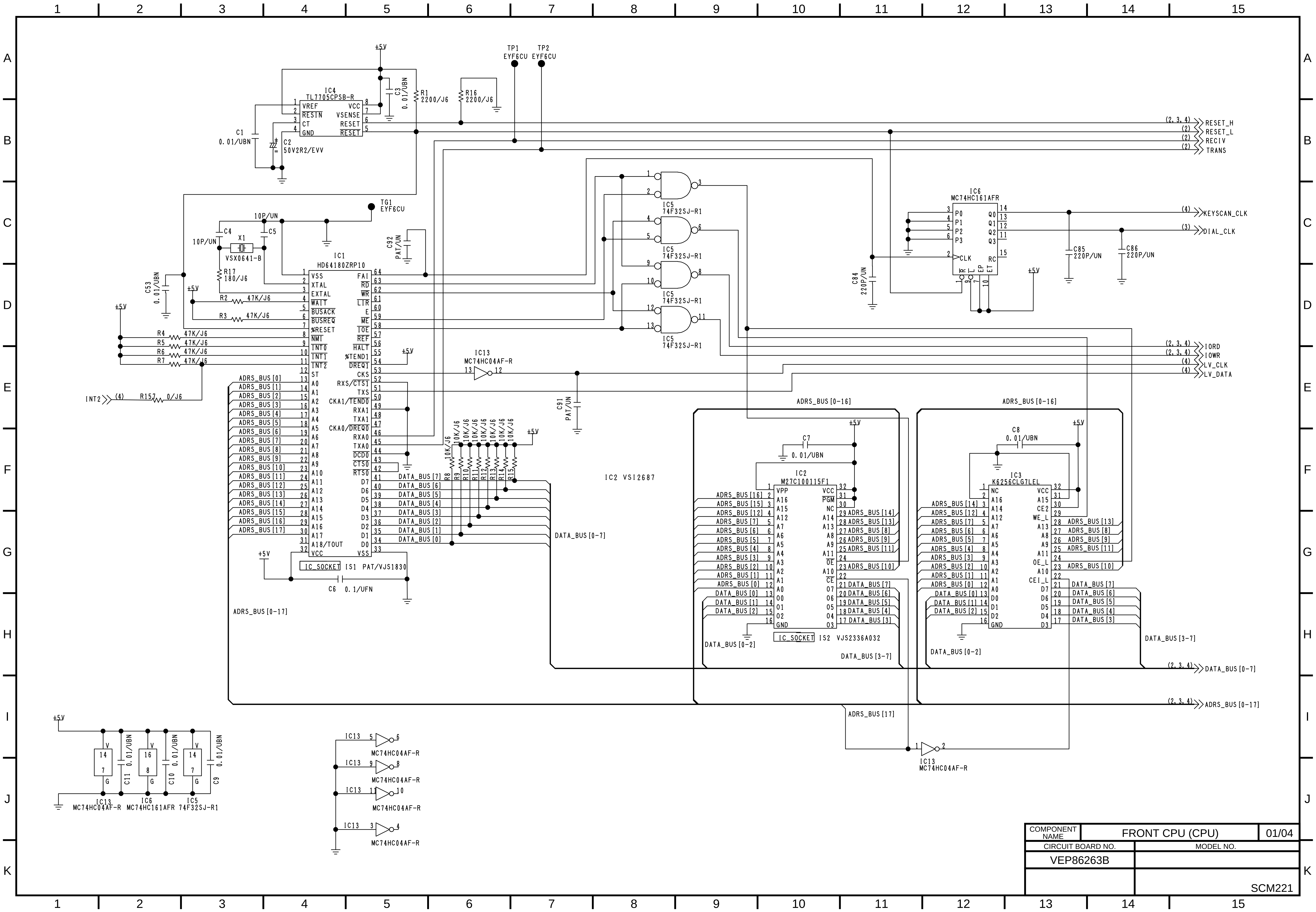
COMPONENT NAME	FRONT SW (LED)	02/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A49B		
	SCM227	


SW_COL_BUS[0-7]
SW_COL_BUS[0] (1)
SW_COL_BUS[1] (1)
SW_COL_BUS[2] (1)
SW_COL_BUS[3] (1)
SW_COL_BUS[4] (1)
SW_COL_BUS[5] (1)
SW_COL_BUS[6] (1)
SW_COL_BUS[7] (1)
SW1 VSP0791 FF
SW2 VSP0788 STOP
SW3 VSP0792 REW
SW4 VSP0789 REC
SW5 VSP0790 PLAY
SW6 VSP0795 EDIT
SW7 VSP0795 SEARCH
SW8 VSP0864A000 READY
D17 MA152WA-TX
D18 MA152WA-TX
D19 MA152WA-TX
D20 MA152WA-TX
SW_ROW_BUS[0]
SW27 VSS0226 SHTL/SLOW
SW28 VSS0226 REMOTE / LOCAL
SW9 VSP0864A000 RECORDER
SW10 VSP0864A000 PLAYER
SW11 VSP0795 PREROLL
SW12 VSP0795 PREV/REV
SW13 VSP0998 AUTO EDIT
D21 MA152WA-TX
D22 MA152WA-TX
D23 MA152WA-TX
D24 MA152WA-TX
SW_ROW_BUS[1]
SW29 VSS0226 TAPE /FF
SW30 VSS0226 INT /EXT
D26 MA152A-TX TC
SW31 VSS0226 (HSW1931-01-930)
D27 MA152A-TX UB
SW32 VSP1005 TC/ CTL
SW33 PAT/VSP1005 PRE-READ
SW34 VSP1005 RESET
SW35 PAT/VSP1005 B
D25 MA152WA-TX
D28 MA152WA-TX
D29 MA152WA-TX
SW_ROW_BUS[2]
SW14 VSP0864A039 V OUT
SW15 VSP0999A001 SET
SW16 VSP0864A038 V IN
SW25 VSP0997A002 –
SW26 VSP0997A001 +
SW36 VSP1005 SHIFT
SW37 VSP1005 ADJ
SW38 VSP1005 START
D30 MA152WA-TX
D31 MA152WA-TX
D32 MA152WA-TX
D33 MA152WA-TX
SW_ROW_BUS[3]
SW17 PAT/VSP0853A000 ASSEM/2-4CH
SW18 VSP0853A000 VIDEO/ASM
SW19 PAT/VSP0853A000 CH1/SPACE
SW20 VSP0853A000 CH2/VIDEO
SW21 VSP0853A000 CH3/CH1-2
SW22 VSP0853A000 CH4/CH3-4
SW23 VSP0853A000 CUE
SW24 VSP0853A000 TC
D34 MA152WA-TX
D35 MA152WA-TX
D36 MA152WA-TX
D37 MA152WA-TX
SW_ROW_BUS[4]
SW39 VSP1005 MONI SET/VID CUE
SW40 VSP1005 MONI L
SW41 VSP1005 MONI R
D39 MA152A-TX
SW42 VSP0864A048 A IN
SW43 VSP0864A049 A OUT
D38 MA152WA-TX
D40 MA152WA-TX
SW_ROW_BUS[5]
SW_ROW_BUS[0-5]
SW_ROW_BUS[0] (1)
SW_ROW_BUS[1] (1)
SW_ROW_BUS[2] (1)
SW_ROW_BUS[3] (1)
SW_ROW_BUS[4] (1)
SW_ROW_BUS[5] (1)

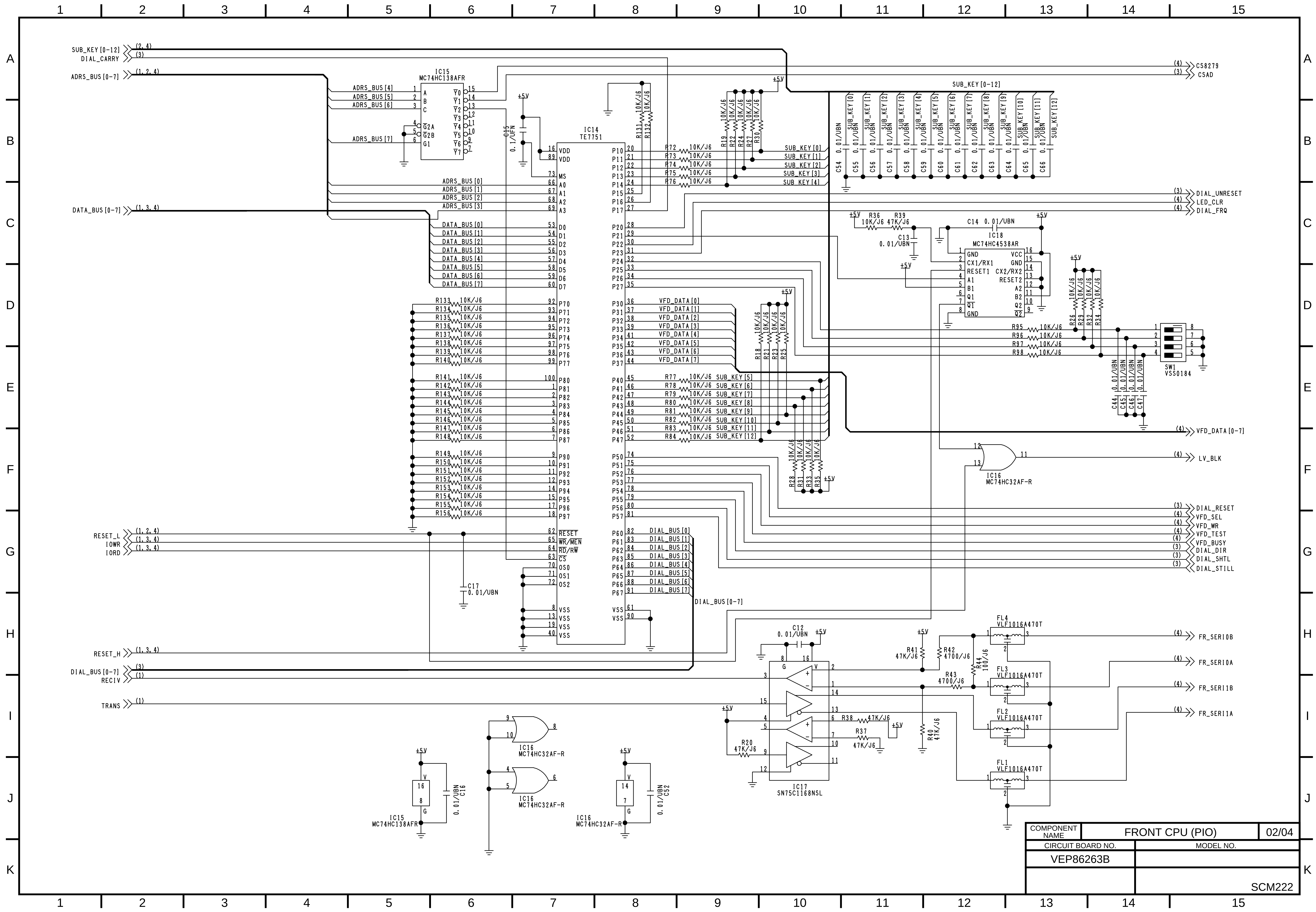
COMPONENT NAME	FRONT SW (SW)	03/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A49B		
	SCM228	


VFD[1-32]
IC11
UPD16310GF
DP1
VSL0462
AUDIO LEVEL VFD
F-
F+
NP
NC
VDD1
VDD2
VSS1
VSS2
R/L
PC
CLK
STB
BLK
LV_DATA
LV_CLK
LV_BLK
LV_STB
(1)
+5V
C14
0.01/UBN
R142
4700/J6
F1
EYP2BN135
R116
PAT/J6
R117
PAT/J6
R111
6800/DS
R112
100/DS
Q46
2SC1815Y
C17
0.033/UBN
Q47
2SC3074Y
C18
0.01/UBN
R114
22/DS
Q45
2SC1815Y
R113
220/DS
R110
10K/J6
C16
50V4R7/EVV
C13
6V1000
TR1
VLT0869
D46
MA701A-TX
C19
10V330/EGE
D45
MA166
R115
10K/J8
C20
50V47/EGE
D47
MA4030-M
D44
MA4300-M

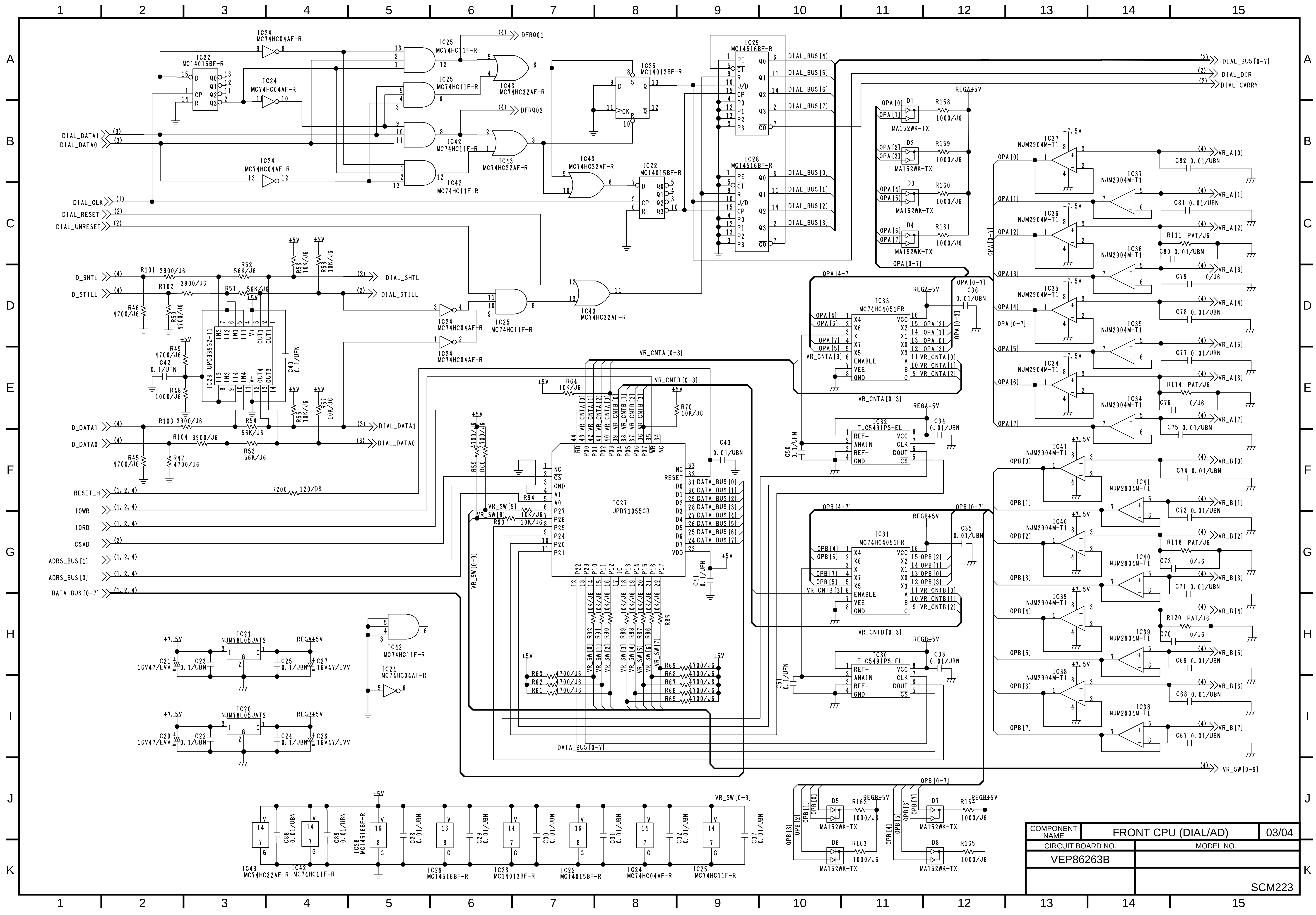
COMPONENT NAME	FRONT SW (VFD)	04/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A49B		
	SCM229	


IC1 HD64180ZRP10
IC2 M27C100115F1
IC2 VSI2687
IC3 K6256CLG7LEL
IC4 TL7705CPSB-R
IC5 74F32SJ-R1
IC6 MC74HC161AFR
IC13 MC74HC04AF-R
TP1 EYF6CU
TP2 EYF6CU
TG1 EYF6CU
X1 VSX0641-B
C1 0.01/UBN
C2 50V2R2/EVV
C3 0.01/UBN
C4 10P/UN
C5 10P/UN
C6 0.1/UFN
C7 0.01/UBN
C8 0.01/UBN
C53 0.01/UBN
C84 220P/UN
C85 220P/UN
C86 220P/UN
C91 PAT/UN
C92 PAT/UN
R1 2200/J6
R16 2200/J6
R17 180/J6
R2 47K/J6
R3 47K/J6
R4 47K/J6
R5 47K/J6
R6 47K/J6
R7 47K/J6
R157 0/J6
R8–R15 10K/J6
IS1 PAT/VJS1830
IS2 VJS2336A032
IC SOCKET
+5V
INT2 (4)
(2, 3, 4) RESET_H
(2) RESET_L
(2) RECIV
(2) TRANS
(4) KEYSCAN_CLK
(3) DIAL_CLK
(2, 3, 4) IORD
(2, 3, 4) IOWR
(4) LV_CLK
(4) LV_DATA
(2, 3, 4) DATA_BUS [0-7]
(2, 3, 4) ADRS_BUS [0-17]
ADRS_BUS [0-16]
ADRS_BUS [17]
DATA_BUS [0-2]
DATA_BUS [3-7]
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

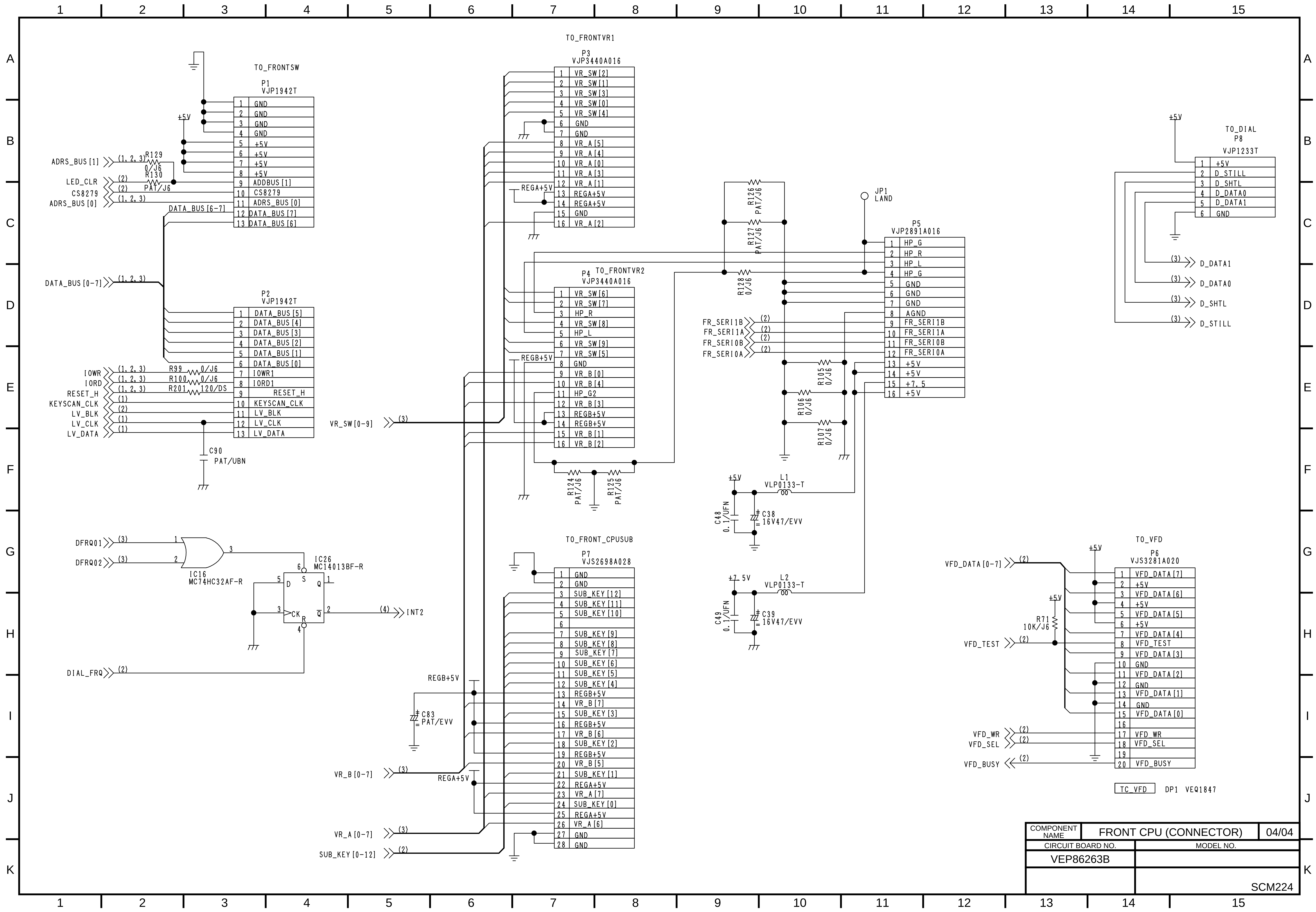
COMPONENT NAME	FRONT CPU (CPU)	01/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP86263B		
	SCM221	


SUB_KEY[0-12]
DIAL_CARRY
ADRS_BUS[0-7]
DATA_BUS[0-7]
IC15
MC74HC138AFR
IC14
TE7751
C15 0.1/UFN
R131 10K/J6
R132 10K/J6
SUB_KEY[0]
SUB_KEY[1]
SUB_KEY[2]
SUB_KEY[3]
SUB_KEY[4]
CS8279
CSAD
DIAL_UNRESET
LED_CLR
DIAL_FRQ
IC18
MC74HC4538AR
C14 0.01/UBN
C13 0.01/UBN
R36 10K/J6
R39 47K/J6
SW1
VSS0184
R95 10K/J6
R96 10K/J6
R97 10K/J6
R98 10K/J6
VFD_DATA[0-7]
IC16
MC74HC32AF-R
LV_BLK
DIAL_RESET
VFD_SEL
VFD_WR
VFD_TEST
VFD_BUSY
DIAL_DIR
DIAL_SHTL
DIAL_STILL
RESET_L
IOWR
IORD
C17 0.01/UBN
DIAL_BUS[0-7]
RESET_H
RECIV
TRANS
C12 0.01/UBN
IC17
SN75C1168NSL
R41 47K/J6
R42 4700/J6
R43 4700/J6
R44 100/J6
R40 47K/J6
R38 47K/J6
R37 47K/J6
R20 47K/J6
FL1 VLF1016A470T
FL2 VLF1016A470T
FL3 VLF1016A470T
FL4 VLF1016A470T
FR_SERI0B
FR_SERI0A
FR_SERI1B
FR_SERI1A
+5V
C16 0.01/UBN
C52 0.01/UBN

COMPONENT NAME	FRONT CPU (PIO)	02/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP86263B		
	SCM222	

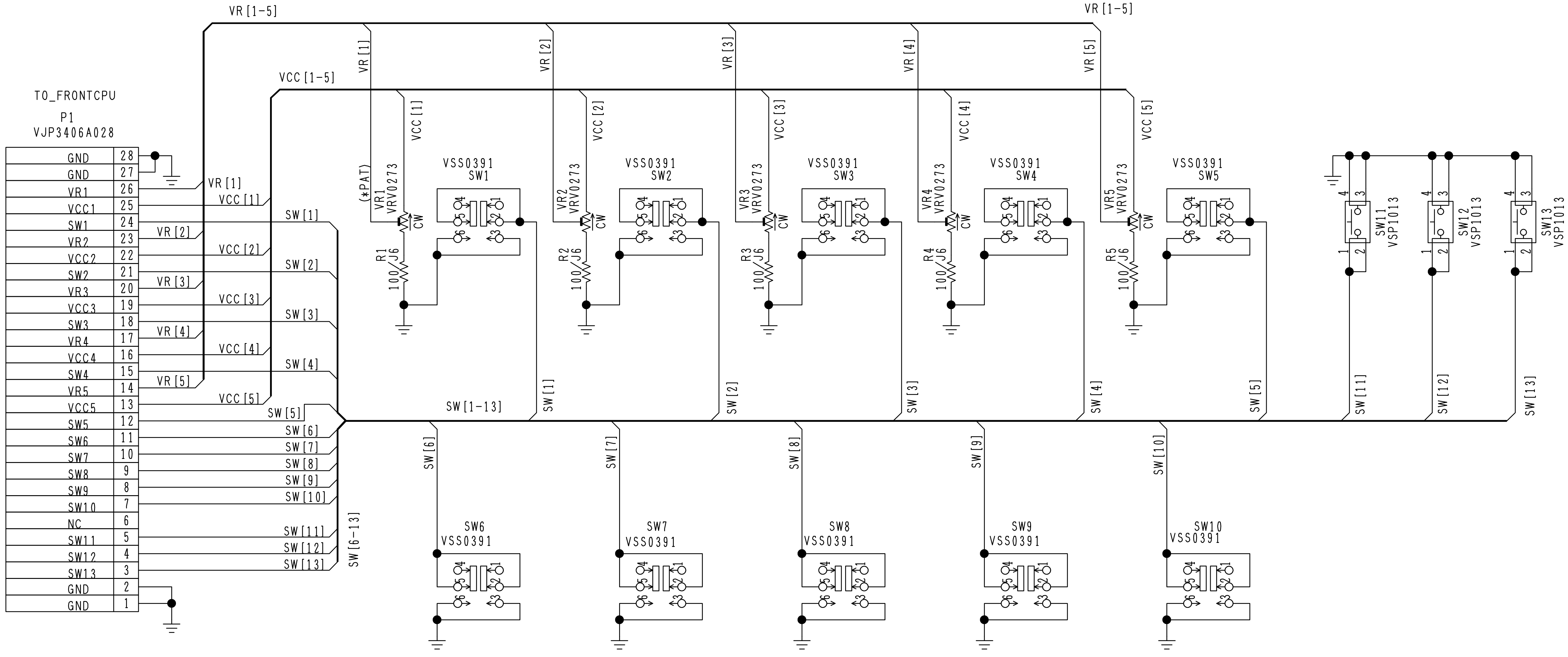

DIAL_DATA1
DIAL_DATA0
DIAL_CLK
DIAL_RESET
DIAL_UNRESET
D_SHTL
D_STILL
D_DATA1
D_DATA0
RESET_H
IOWR
IORD
CSAD
ADRS_BUS[1]
ADRS_BUS[0]
DATA_BUS[0-7]
DFRQ01
DFRQ02
DIAL_BUS[0-7]
DIAL_DIR
DIAL_CARRY
DIAL_SHTL
DIAL_STILL
IC22 MC14015BF-R
IC24 MC74HC04AF-R
IC25 MC74HC11F-R
IC26 MC14013BF-R
IC28 MC14516BF-R
IC29 MC14516BF-R
IC42 MC74HC11F-R
IC43 MC74HC32AF-R
IC23 UPC339G2-T1
IC27 UPD71055GB
IC31 MC74HC4051FR
IC33 MC74HC4051FR
IC30 TLC549IPS-EL
IC32 TLC549IPS-EL
IC34 NJM2904M-T1
IC35 NJM2904M-T1
IC36 NJM2904M-T1
IC37 NJM2904M-T1
IC38 NJM2904M-T1
IC39 NJM2904M-T1
IC40 NJM2904M-T1
IC41 NJM2904M-T1
IC20 NJM78L05UAT2
IC21 NJM78L05UAT2
D1 MA152WK-TX
D2 MA152WK-TX
D3 MA152WK-TX
D4 MA152WK-TX
D5 MA152WK-TX
D6 MA152WK-TX
D7 MA152WK-TX
D8 MA152WK-TX
REGA+5V
REGB+5V
+7.5V
+5V
VR_CNTA[0-3]
VR_CNTB[0-3]
VR_SW[0-9]
OPA[0-7]
OPB[0-7]
VR_A[0]
VR_A[1]
VR_A[2]
VR_A[3]
VR_A[4]
VR_A[5]
VR_A[6]
VR_A[7]
VR_B[0]
VR_B[1]
VR_B[2]
VR_B[3]
VR_B[4]
VR_B[5]
VR_B[6]
VR_B[7]

COMPONENT NAME	FRONT CPU (DIAL/AD)	03/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP86263B		
	SCM223	

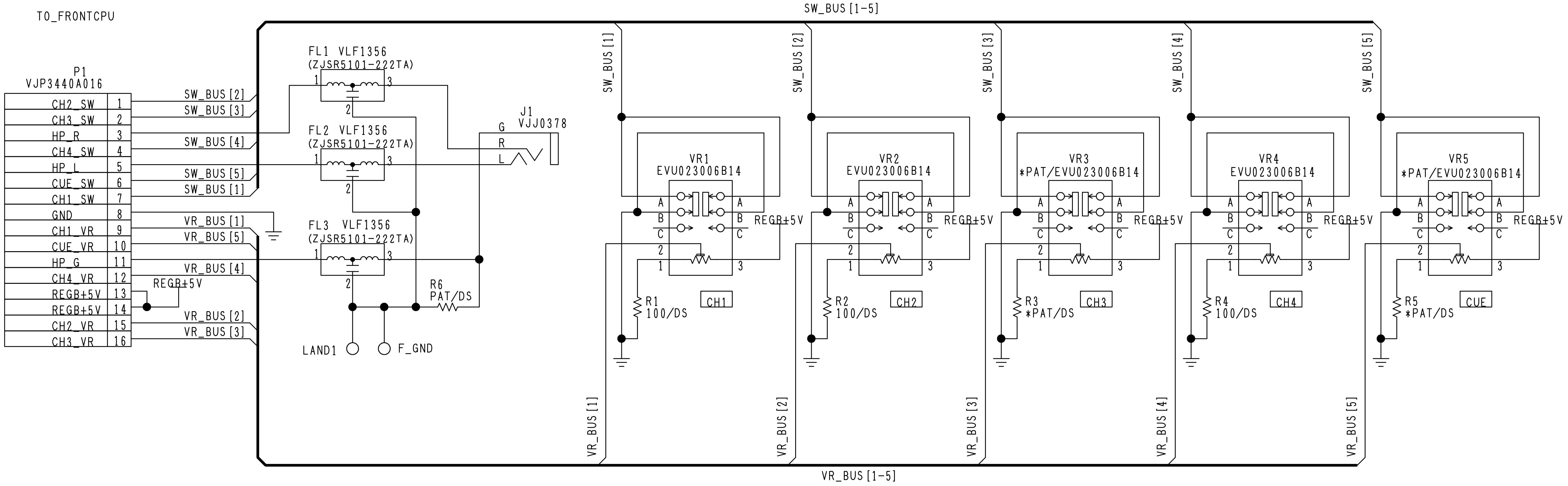

TO_FRONTSW
P1 VJP1942T
1 GND
2 GND
3 GND
4 GND
5 +5V
6 +5V
7 +5V
8 +5V
9 ADDBUS[1]
10 CS8279
11 ADRS_BUS[0]
12 DATA_BUS[7]
13 DATA_BUS[6]
+5V
ADRS_BUS[1] (1,2,3) R129 0/J6
LED_CLR (2) R130 PAT/J6
CS8279 (2)
ADRS_BUS[0] (1,2,3)
DATA_BUS[6-7]
DATA_BUS[0-7] (1,2,3)
P2 VJP1942T
1 DATA_BUS[5]
2 DATA_BUS[4]
3 DATA_BUS[3]
4 DATA_BUS[2]
5 DATA_BUS[1]
6 DATA_BUS[0]
7 IOWR1
8 IORD1
9 RESET_H
10 KEYSCAN_CLK
11 LV_BLK
12 LV_CLK
13 LV_DATA
IOWR (1,2,3) R99 0/J6
IORD (1,2,3) R100 0/J6
RESET_H (1,2,3) R201 120/DS
KEYSCAN_CLK (1)
LV_BLK (2)
LV_CLK (1)
LV_DATA (1)
C90 PAT/UBN
TO_FRONTVR1
P3 VJP3440A016
1 VR_SW[2]
2 VR_SW[1]
3 VR_SW[3]
4 VR_SW[0]
5 VR_SW[4]
6 GND
7 GND
8 VR_A[5]
9 VR_A[4]
10 VR_A[0]
11 VR_A[3]
12 VR_A[1]
13 REGA+5V
14 REGA+5V
15 GND
16 VR_A[2]
REGA+5V
P4 VJP3440A016 TO_FRONTVR2
1 VR_SW[6]
2 VR_SW[7]
3 HP_R
4 VR_SW[8]
5 HP_L
6 VR_SW[9]
7 VR_SW[5]
8 GND
9 VR_B[0]
10 VR_B[4]
11 HP_G2
12 VR_B[3]
13 REGB+5V
14 REGB+5V
15 VR_B[1]
16 VR_B[2]
REGB+5V
VR_SW[0-9] (3)
R124 PAT/J6
R125 PAT/J6
R126 PAT/J6
R127 PAT/J6
R128 0/J6
JP1 LAND
P5 VJP2891A016
1 HP_G
2 HP_R
3 HP_L
4 HP_G
5 GND
6 GND
7 GND
8 AGND
9 FR_SERI1B
10 FR_SERI1A
11 FR_SERI0B
12 FR_SERI0A
13 +5V
14 +5V
15 +7.5
16 +5V
FR_SERI1B (2)
FR_SERI1A (2)
FR_SERI0B (2)
FR_SERI0A (2)
R105 0/J6
R106 0/J6
R107 0/J6
+5V L1 VLP0133-T
C48 0.1/UFN
C38 16V47/EVV
+7.5V L2 VLP0133-T
C49 0.1/UFN
C39 16V47/EVV
+5V
TO_DIAL P8 VJP1233T
1 +5V
2 D_STILL
3 D_SHTL
4 D_DATA0
5 D_DATA1
6 GND
(3) D_DATA1
(3) D_DATA0
(3) D_SHTL
(3) D_STILL
DFRQ01 (3) 1
DFRQ02 (3) 2
3
IC16 MC74HC32AF-R
IC26 MC14013BF-R
6 S
5 D
Q 1
3 CK
Q̄ 2
R 4
(4) INT2
DIAL_FRQ (2)
TO_FRONT_CPUSUB
P7 VJS2698A028
1 GND
2 GND
3 SUB_KEY[12]
4 SUB_KEY[11]
5 SUB_KEY[10]
6
7 SUB_KEY[9]
8 SUB_KEY[8]
9 SUB_KEY[7]
10 SUB_KEY[6]
11 SUB_KEY[5]
12 SUB_KEY[4]
13 REGB+5V
14 VR_B[7]
15 SUB_KEY[3]
16 REGB+5V
17 VR_B[6]
18 SUB_KEY[2]
19 REGB+5V
20 VR_B[5]
21 SUB_KEY[1]
22 REGA+5V
23 VR_A[7]
24 SUB_KEY[0]
25 REGA+5V
26 VR_A[6]
27 GND
28 GND
REGB+5V
C83 PAT/EVV
VR_B[0-7] (3)
REGA+5V
VR_A[0-7] (3)
SUB_KEY[0-12] (2)
TO_VFD
+5V
P6 VJS3281A020
1 VFD_DATA[7]
2 +5V
3 VFD_DATA[6]
4 +5V
5 VFD_DATA[5]
6 +5V
7 VFD_DATA[4]
8 VFD_TEST
9 VFD_DATA[3]
10 GND
11 VFD_DATA[2]
12 GND
13 VFD_DATA[1]
14 GND
15 VFD_DATA[0]
16
17 VFD_WR
18 VFD_SEL
19
20 VFD_BUSY
VFD_DATA[0-7] (2)
+5V R71 10K/J6
VFD_TEST (2)
VFD_WR (2)
VFD_SEL (2)
VFD_BUSY (2)
TC_VFD DP1 VEQ1847
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	FRONT CPU (CONNECTOR)	04/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP86263B		

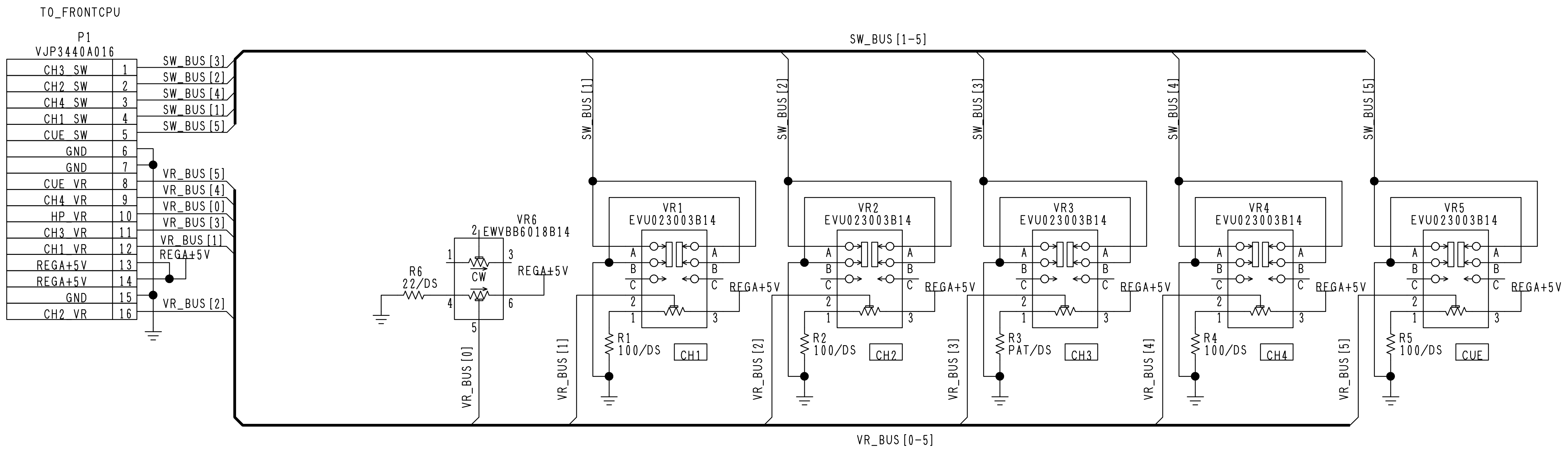
SCM224


TO_FRONTCPU
P1
VJP3406A028
GND 28
GND 27
VR1 26
VCC1 25
SW1 24
VR2 23
VCC2 22
SW2 21
VR3 20
VCC3 19
SW3 18
VR4 17
VCC4 16
SW4 15
VR5 14
VCC5 13
SW5 12
SW6 11
SW7 10
SW8 9
SW9 8
SW10 7
NC 6
SW11 5
SW12 4
SW13 3
GND 2
GND 1
VR[1-5]
VCC[1-5]
VR[1]
VCC[1]
VR[2]
VCC[2]
VR[3]
VCC[3]
VR[4]
VCC[4]
VR[5]
VCC[5]
SW[1]
SW[2]
SW[3]
SW[4]
SW[5]
SW[6]
SW[7]
SW[8]
SW[9]
SW[10]
SW[11]
SW[12]
SW[13]
SW[1-13]
SW[6-13]
(*PAT)
VR1 VRV0273
VR2 VRV0273
VR3 VRV0273
VR4 VRV0273
VR5 VRV0273
CW
R1 100/J6
R2 100/J6
R3 100/J6
R4 100/J6
R5 100/J6
VSS0391 SW1
VSS0391 SW2
VSS0391 SW3
VSS0391 SW4
VSS0391 SW5
SW6 VSS0391
SW7 VSS0391
SW8 VSS0391
SW9 VSS0391
SW10 VSS0391
SW11 VSP1013
SW12 VSP1013
SW13 VSP1013

COMPONENT NAME	FRONT CPU SUB	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP86148A		
	SCM225	

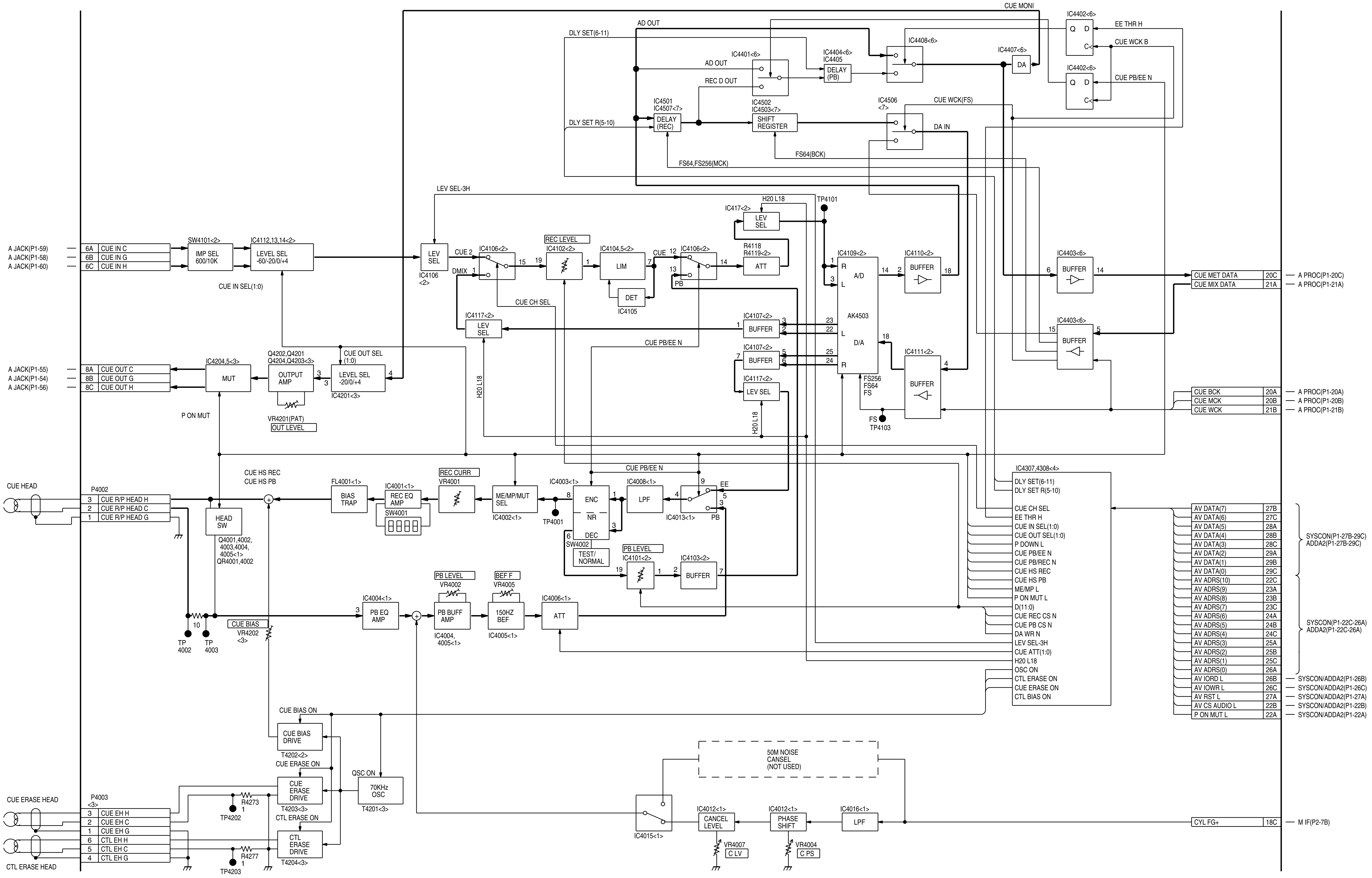

TO_FRONTCPU
P1
VJP3440A016
CH2_SW 1
CH3_SW 2
HP_R 3
CH4_SW 4
HP_L 5
CUE_SW 6
CH1_SW 7
GND 8
CH1_VR 9
CUE_VR 10
HP_G 11
CH4_VR 12
REGB+5V 13
REGB+5V 14
CH2_VR 15
CH3_VR 16
SW_BUS[2]
SW_BUS[3]
SW_BUS[4]
SW_BUS[5]
SW_BUS[1]
VR_BUS[1]
VR_BUS[5]
VR_BUS[4]
REGB+5V
VR_BUS[2]
VR_BUS[3]
FL1 VLF1356
(ZJSR5101-222TA)
FL2 VLF1356
(ZJSR5101-222TA)
FL3 VLF1356
(ZJSR5101-222TA)
J1
VJJ0378
G
R
L
R6
PAT/DS
LAND1
F_GND
SW_BUS[1-5]
VR_BUS[1-5]
SW_BUS[1]
SW_BUS[2]
SW_BUS[3]
SW_BUS[4]
SW_BUS[5]
VR1
EVU023006B14
VR2
EVU023006B14
VR3
*PAT/EVU023006B14
VR4
EVU023006B14
VR5
*PAT/EVU023006B14
A
B
C
REGB+5V
R1
100/DS
R2
100/DS
R3
*PAT/DS
R4
100/DS
R5
*PAT/DS
CH1
CH2
CH3
CH4
CUE
VR_BUS[1]
VR_BUS[2]
VR_BUS[3]
VR_BUS[4]
VR_BUS[5]

COMPONENT NAME	FRONT VR 1	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80963C		
	SCM230	

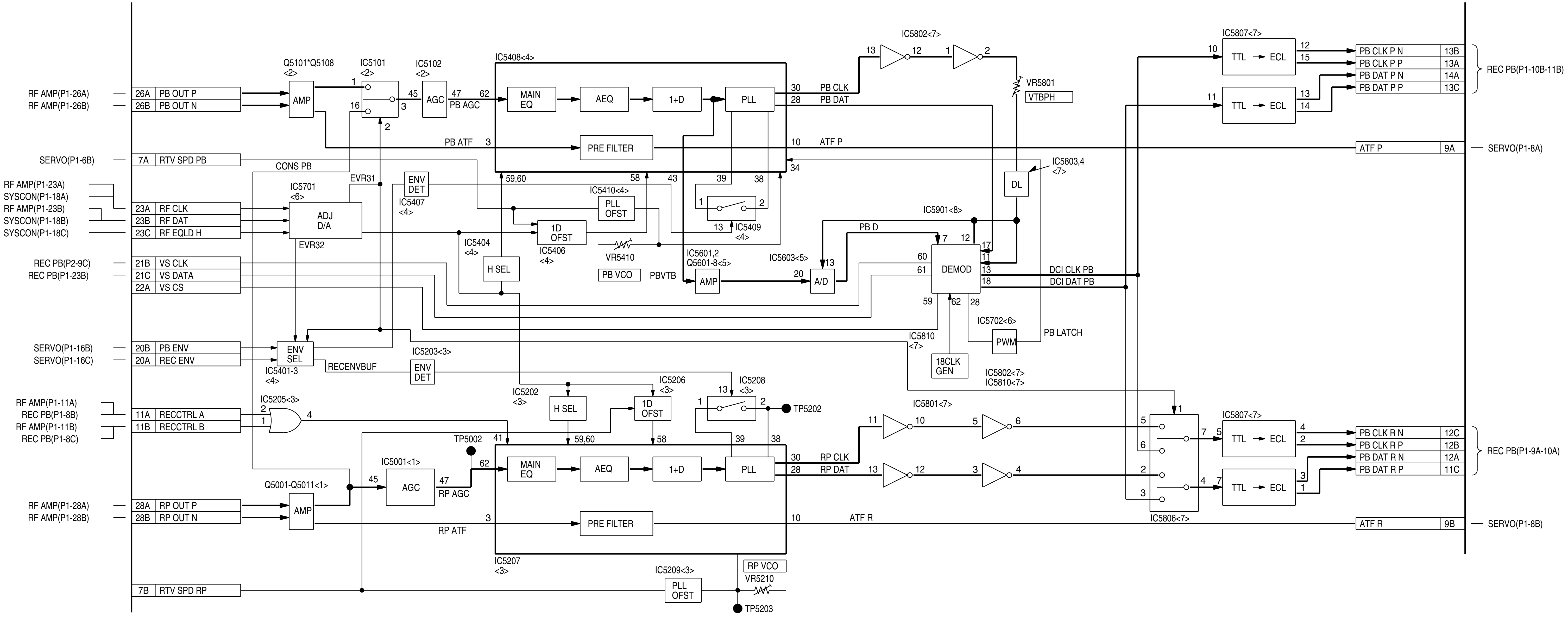

TO_FRONTCPU
P1
VJP3440A016
CH3 SW 1
CH2 SW 2
CH4 SW 3
CH1 SW 4
CUE SW 5
GND 6
GND 7
CUE VR 8
CH4 VR 9
HP VR 10
CH3 VR 11
CH1 VR 12
REGA+5V 13
REGA+5V 14
GND 15
CH2 VR 16
SW_BUS [3]
SW_BUS [2]
SW_BUS [4]
SW_BUS [1]
SW_BUS [5]
VR_BUS [5]
VR_BUS [4]
VR_BUS [0]
VR_BUS [3]
VR_BUS [1]
REGA+5V
VR_BUS [2]
SW_BUS [1-5]
VR_BUS [0-5]
VR6
EWVBB6018B14
CW
R6
22/DS
REGA+5V
VR_BUS [0]
VR1
EVU023003B14
R1
100/DS
CH1
VR2
EVU023003B14
R2
100/DS
CH2
VR3
EVU023003B14
R3
PAT/DS
CH3
VR4
EVU023003B14
R4
100/DS
CH4
VR5
EVU023003B14
R5
100/DS
CUE
SW_BUS [1]
SW_BUS [2]
SW_BUS [3]
SW_BUS [4]
SW_BUS [5]
VR_BUS [1]
VR_BUS [2]
VR_BUS [3]
VR_BUS [4]
VR_BUS [5]
A
B
C
1
2
3

COMPONENT NAME	FRONT VR 2	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80964C		
	SCM231	

H1 CUE BLOCK DIAGRAM

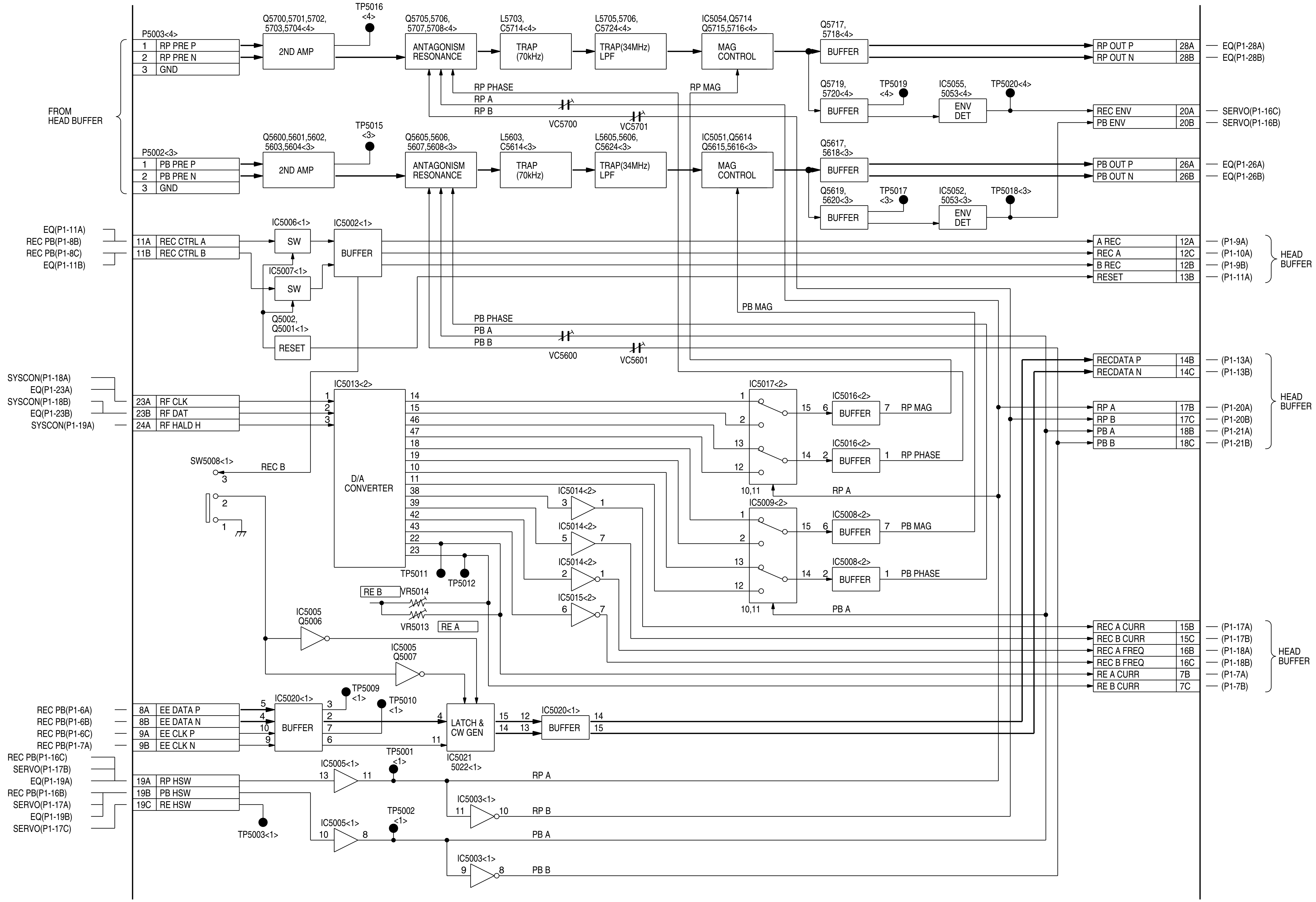

CUE MONI
AD OUT
DLY SET(6-11)
IC4402<6>
Q D
C
EE THR H
CUE WCK B
IC4408<6>
IC4407<6>
DA
IC4401<6>
IC4404<6>
IC4405
DELAY
(PB)
AD OUT
REC D OUT
IC4402<6>
CUE PB/EE N
IC4501
IC4507<7>
DELAY
(REC)
IC4502
IC4503<7>
SHIFT
REGISTER
IC4506
<7>
CUE WCK(FS)
DA IN
DLY SET R(5-10)
FS64(BCK)
FS64,FS256(MCK)
LEV SEL-3H
H20 L18
TP4101
IC417<2>
LEV
SEL
R4118
R4119<2>
ATT
A JACK(P1-59)
A JACK(P1-58)
A JACK(P1-60)
6A CUE IN C
6B CUE IN G
6C CUE IN H
SW4101<2>
IMP SEL
600/10K
IC4112,13,14<2>
LEVEL SEL
-60/-20/0/+4
CUE IN SEL(1:0)
LEV
SEL
IC4106
<2>
CUE 2
DMIX
IC4106<2>
REC LEVEL
IC4102<2>
IC4104,5<2>
LIM
DET
IC4105
CUE
IC4106<2>
PB
CUE CH SEL
IC4109<2>
R
L
A/D
AK4503
D/A
R
L
IC4110<2>
BUFFER
IC4403<6>
BUFFER
IC4403<6>
BUFFER
CUE MET DATA 20C
CUE MIX DATA 21A
A PROC(P1-20C)
A PROC(P1-21A)
IC4117<2>
LEV
SEL
IC4107<2>
BUFFER
IC4107<2>
BUFFER
CUE PB/EE N
IC4117<2>
LEV SEL
IC4111<2>
BUFFER
FS256
FS64
FS
FS
TP4103
H20 L18
H20 L18
CUE BCK 20A
CUE MCK 20B
CUE WCK 21B
A PROC(P1-20A)
A PROC(P1-20B)
A PROC(P1-21B)
A JACK(P1-55)
A JACK(P1-54)
A JACK(P1-56)
8A CUE OUT C
8B CUE OUT G
8C CUE OUT H
IC4204,5<3>
MUT
Q4202,Q4201
Q4204,Q4203<3>
OUTPUT
AMP
CUE OUT SEL
(1:0)
LEVEL SEL
-20/0/+4
IC4201<3>
VR4201(PAT)
OUT LEVEL
P ON MUT
CUE HEAD
P4002
3 CUE R/P HEAD H
2 CUE R/P HEAD C
1 CUE R/P HEAD G
HEAD
SW
Q4001,4002,
4003,4004,
4005<1>
QR4001,4002
CUE HS REC
CUE HS PB
FL4001<1>
BIAS
TRAP
IC4001<1>
REC EQ
AMP
SW4001
REC CURR
VR4001
ME/MP/MUT
SEL
IC4002<1>
IC4003<1>
ENC
NR
DEC
TP4001
SW4002
TEST/
NORMAL
CUE PB/EE N
IC4008<1>
LPF
IC4013<1>
EE
PB
PB LEVEL
IC4101<2>
IC4103<2>
BUFFER
IC4307,4308<4>
DLY SET(6-11)
DLY SET R(5-10)
CUE CH SEL
EE THR H
CUE IN SEL(1:0)
CUE OUT SEL(1:0)
P DOWN L
CUE PB/EE N
CUE PB/REC N
CUE HS REC
CUE HS PB
ME/MP L
P ON MUT L
D(11:0)
CUE REC CS N
CUE PB CS N
DA WR N
LEV SEL-3H
CUE ATT(1:0)
H20 L18
OSC ON
CTL ERASE ON
CUE ERASE ON
CTL BIAS ON
AV DATA(7) 27B
AV DATA(6) 27C
AV DATA(5) 28A
AV DATA(4) 28B
AV DATA(3) 28C
AV DATA(2) 29A
AV DATA(1) 29B
AV DATA(0) 29C
AV ADRS(10) 22C
AV ADRS(9) 23A
AV ADRS(8) 23B
AV ADRS(7) 23C
AV ADRS(6) 24A
AV ADRS(5) 24B
AV ADRS(4) 24C
AV ADRS(3) 25A
AV ADRS(2) 25B
AV ADRS(1) 25C
AV ADRS(0) 26A
AV IORD L 26B
AV IOWR L 26C
AV RST L 27A
AV CS AUDIO L 22B
P ON MUT L 22A
SYSCON(P1-27B-29C)
ADDA2(P1-27B-29C)
SYSCON(P1-22C-26A)
ADDA2(P1-22C-26A)
SYSCON/ADDA2(P1-26B)
SYSCON/ADDA2(P1-26C)
SYSCON/ADDA2(P1-27A)
SYSCON/ADDA2(P1-22B)
SYSCON/ADDA2(P1-22A)
PB LEVEL
VR4002
BEF F
VR4005
IC4004<1>
PB EQ
AMP
PB BUFF
AMP
IC4004,
4005<1>
150HZ
BEF
IC4005<1>
IC4006<1>
ATT
CUE BIAS
VR4202
<3>
TP
4002
TP
4003
CUE BIAS ON
CUE BIAS
DRIVE
T4202<2>
CUE ERASE ON
QSC ON
70KHz
OSC
T4201<3>
CUE
ERASE
DRIVE
T4203<3>
CTL ERASE ON
CTL
ERASE
DRIVE
T4204<3>
CUE ERASE HEAD
P4003
<3>
3 CUE EH H
2 CUE EH C
1 CUE EH G
6 CTL EH H
5 CTL EH C
4 CTL EH G
CTL ERASE HEAD
R4273
TP4202
R4277
TP4203
50M NOISE
CANSEL
(NOT USED)
IC4015<1>
IC4012<1>
CANCEL
LEVEL
VR4007
C LV
IC4012<1>
PHASE
SHIFT
VR4004
C PS
IC4016<1>
LPF
CYL FG+ 18C
M IF(P2-7B)

H3 EQ BLOCK DIAGRAM



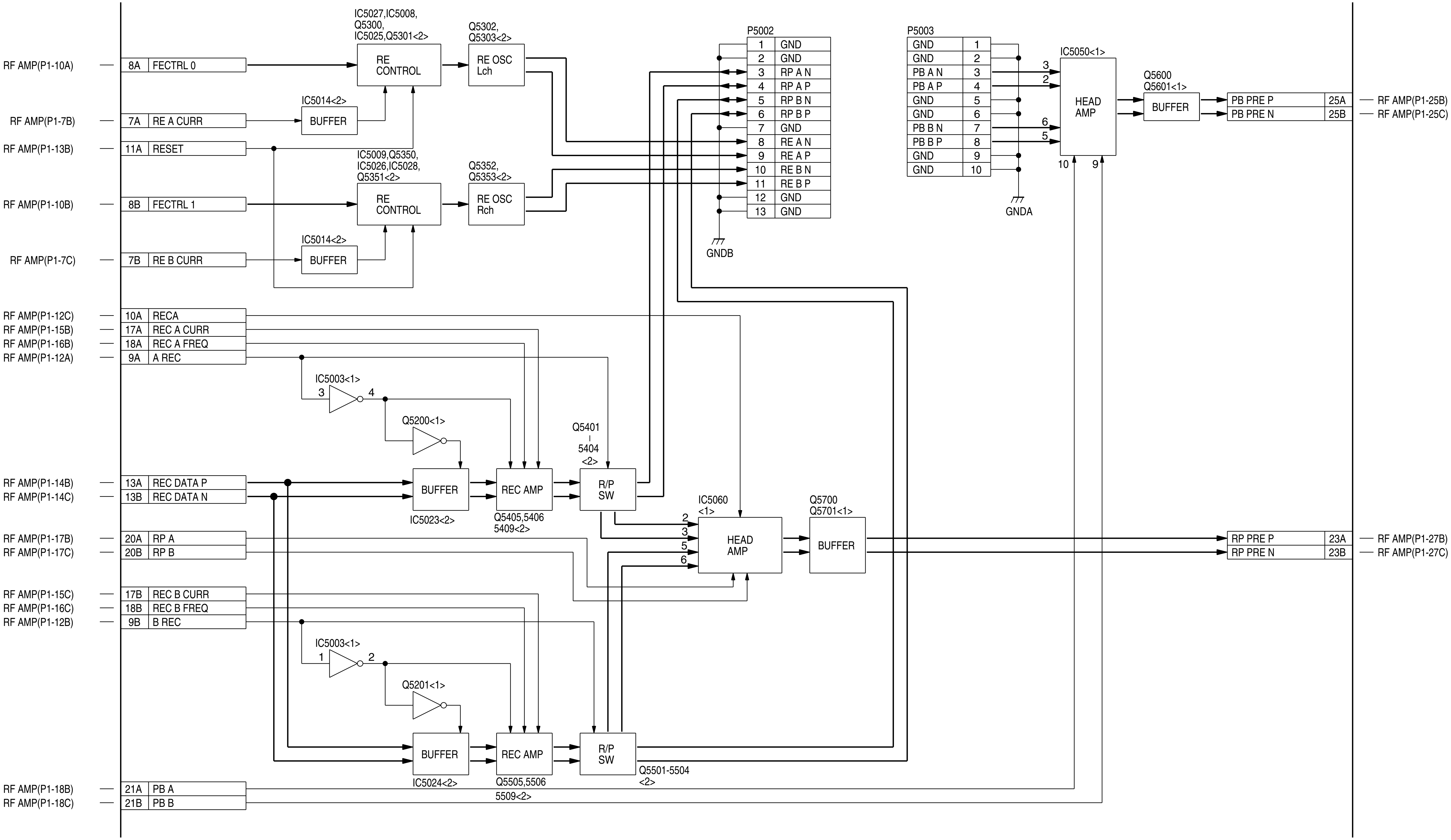
RF AMP(P1-26A)
RF AMP(P1-26B)
26A PB OUT P
26B PB OUT N
SERVO(P1-6B)
7A RTV SPD PB
RF AMP(P1-23A)
SYSCON(P1-18A)
RF AMP(P1-23B)
SYSCON(P1-18B)
SYSCON(P1-18C)
23A RF CLK
23B RF DAT
23C RF EQLD H
REC PB(P2-9C)
REC PB(P1-23B)
21B VS CLK
21C VS DATA
22A VS CS
SERVO(P1-16B)
SERVO(P1-16C)
20B PB ENV
20A REC ENV
RF AMP(P1-11A)
REC PB(P1-8B)
RF AMP(P1-11B)
REC PB(P1-8C)
11A RECCTRL A
11B RECCTRL B
RF AMP(P1-28A)
RF AMP(P1-28B)
28A RP OUT P
28B RP OUT N
7B RTV SPD RP
Q5101*Q5108 <2>
AMP
IC5101 <2>
IC5102 <2>
AGC
45
47
62
PB AGC
IC5408<4>
MAIN EQ
AEQ
1+D
PLL
PRE FILTER
PB ATF
30 PB CLK
28 PB DAT
10 ATF P
34
59,60
58
43
39
38
CONS PB
EVR31
ENV DET
IC5407 <4>
IC5701 <6>
ADJ D/A
EVR32
IC5410<4>
PLL OFST
1D OFST
IC5406 <4>
IC5404 <4>
H SEL
VR5410
PB VCO
PBVTB
IC5409 <4>
IC5601,2
Q5601-8<5>
AMP
IC5603<5>
A/D
PB D
IC5901<8>
DEMOD
60
61
59
62
28
17
11
13
18
DCI CLK PB
DCI DAT PB
IC5702<6>
PWM
PB LATCH
18CLK GEN
IC5810 <7>
IC5803,4 <7>
DL
IC5802<7>
VR5801
VTBPH
IC5807<7>
TTL → ECL
PB CLK P N 13B
PB CLK P P 13A
PB DAT P N 14A
PB DAT P P 13C
REC PB(P1-10B-11B)
ATF P 9A
SERVO(P1-8A)
ENV SEL
IC5401-3 <4>
RECENVBUF
IC5203<3>
ENV DET
IC5205<3>
IC5202 <3>
H SEL
IC5206 <3>
1D OFST
IC5208 <3>
TP5202
IC5801<7>
IC5802<7>
IC5810<7>
TP5002
IC5001<1>
AGC
RP AGC
Q5001-Q5011<1>
AMP
RP ATF
MAIN EQ
AEQ
1+D
PLL
PRE FILTER
30 RP CLK
28 RP DAT
10 ATF R
IC5207 <3>
RP VCO
VR5210
IC5209<3>
PLL OFST
TP5203
IC5806<7>
IC5807<7>
TTL → ECL
PB CLK R N 12C
PB CLK R P 12B
PB DAT R N 12A
PB DAT R P 11C
REC PB(P1-9A-10A)
ATF R 9B
SERVO(P1-8B)

H4 RF AMP BLOCK DIAGRAM

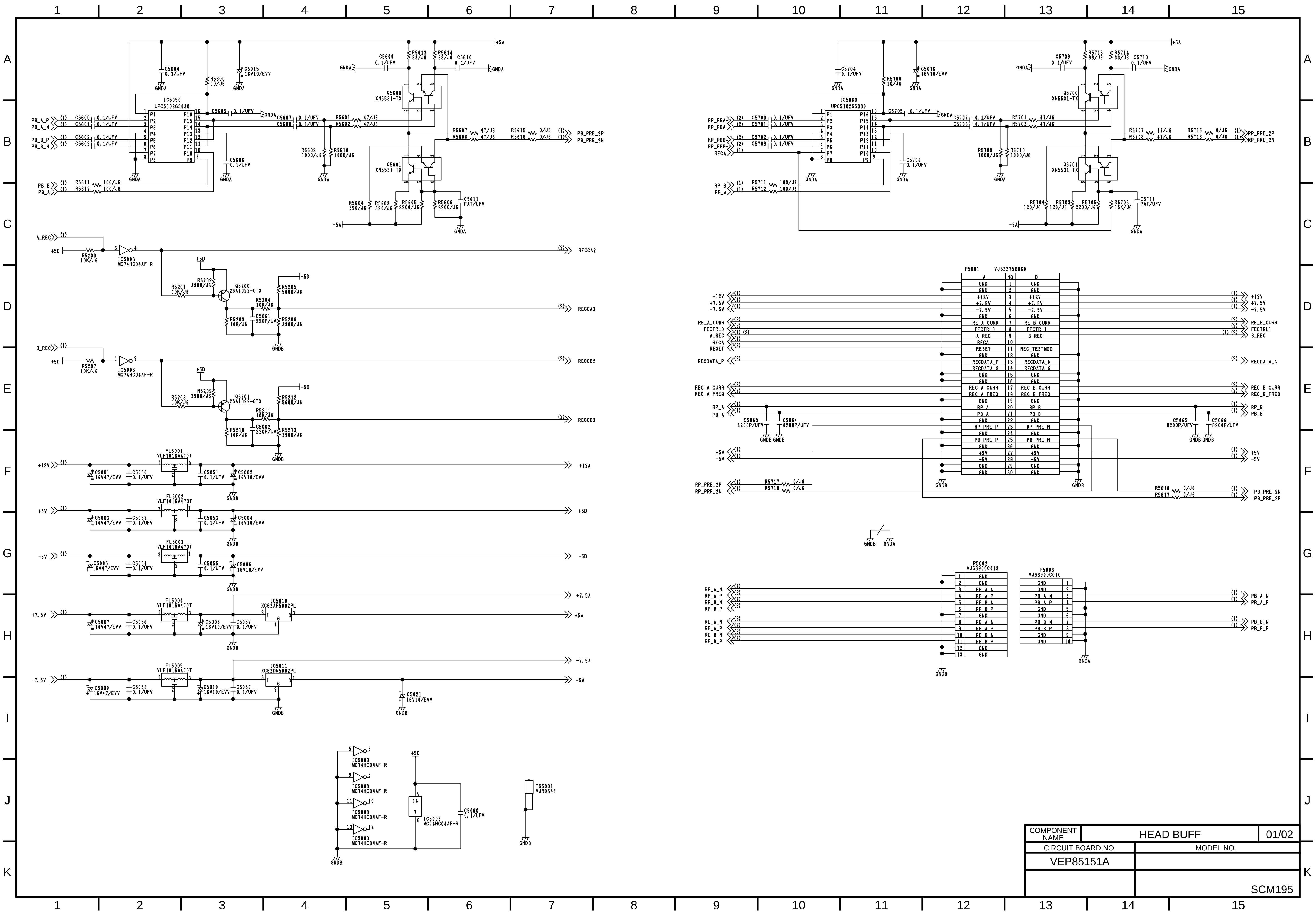


FROM HEAD BUFFER
P5003<4>
1 RP PRE P
2 RP PRE N
3 GND
Q5700,5701,5702, 5703,5704<4>
2ND AMP
TP5016 <4>
Q5705,5706, 5707,5708<4>
ANTAGONISM RESONANCE
L5703, C5714<4>
TRAP (70kHz)
L5705,5706, C5724<4>
TRAP(34MHz) LPF
IC5054,Q5714 Q5715,5716<4>
MAG CONTROL
Q5717, 5718<4>
BUFFER
RP OUT P 28A EQ(P1-28A)
RP OUT N 28B EQ(P1-28B)
RP PHASE
RP A
RP B
RP MAG
VC5700
VC5701
Q5719, 5720<4>
TP5019 <4>
IC5055, 5053<4>
TP5020<4>
ENV DET
REC ENV 20A SERVO(P1-16C)
PB ENV 20B SERVO(P1-16B)
P5002<3>
1 PB PRE P
2 PB PRE N
3 GND
Q5600,5601,5602, 5603,5604<3>
TP5015 <3>
Q5605,5606, 5607,5608<3>
L5603, C5614<3>
L5605,5606, C5624<3>
IC5051,Q5614 Q5615,5616<3>
Q5617, 5618<3>
PB OUT P 26A EQ(P1-26A)
PB OUT N 26B EQ(P1-26B)
Q5619, 5620<3>
TP5017 <3>
IC5052, 5053<3>
TP5018<3>
EQ(P1-11A)
REC PB(P1-8B)
REC PB(P1-8C)
EQ(P1-11B)
11A REC CTRL A
11B REC CTRL B
IC5006<1>
SW
IC5002<1>
BUFFER
IC5007<1>
Q5002, Q5001<1>
RESET
A REC 12A (P1-9A)
REC A 12C (P1-10A)
B REC 12B (P1-9B)
RESET 13B (P1-11A)
HEAD BUFFER
PB MAG
PB PHASE
PB A
PB B
VC5600
VC5601
RECDATA P 14B (P1-13A)
RECDATA N 14C (P1-13B)
SYSCON(P1-18A)
EQ(P1-23A)
SYSCON(P1-18B)
EQ(P1-23B)
SYSCON(P1-19A)
23A RF CLK
23B RF DAT
24A RF HALD H
IC5013<2>
D/A CONVERTER
14 15 46 47 18 19 10 11 38 39 42 43 22 23
TP5011
TP5012
IC5017<2>
IC5016<2>
BUFFER
RP MAG
RP PHASE
RP A 17B (P1-20A)
RP B 17C (P1-20B)
PB A 18B (P1-21A)
PB B 18C (P1-21B)
SW5008<1>
REC B
10,11
IC5009<2>
IC5014<2>
IC5015<2>
IC5008<2>
PB MAG
PB PHASE
RE B
VR5014
VR5013
RE A
IC5005 Q5006
IC5005 Q5007
REC A CURR 15B (P1-17A)
REC B CURR 15C (P1-17B)
REC A FREQ 16B (P1-18A)
REC B FREQ 16C (P1-18B)
RE A CURR 7B (P1-7A)
RE B CURR 7C (P1-7B)
REC PB(P1-6A)
REC PB(P1-6B)
REC PB(P1-6C)
REC PB(P1-7A)
8A EE DATA P
8B EE DATA N
9A EE CLK P
9B EE CLK N
IC5020<1>
TP5009 <1>
TP5010 <1>
LATCH & CW GEN
IC5021 5022<1>
REC PB(P1-16C)
SERVO(P1-17B)
EQ(P1-19A)
REC PB(P1-16B)
SERVO(P1-17A)
EQ(P1-19B)
SERVO(P1-17C)
19A RP HSW
19B PB HSW
19C RE HSW
TP5003<1>
IC5005<1>
TP5001 <1>
TP5002 <1>
IC5003<1>
RP A
RP B
PB A
PB B

HEAD BUFFER BLOCK DIAGRAM

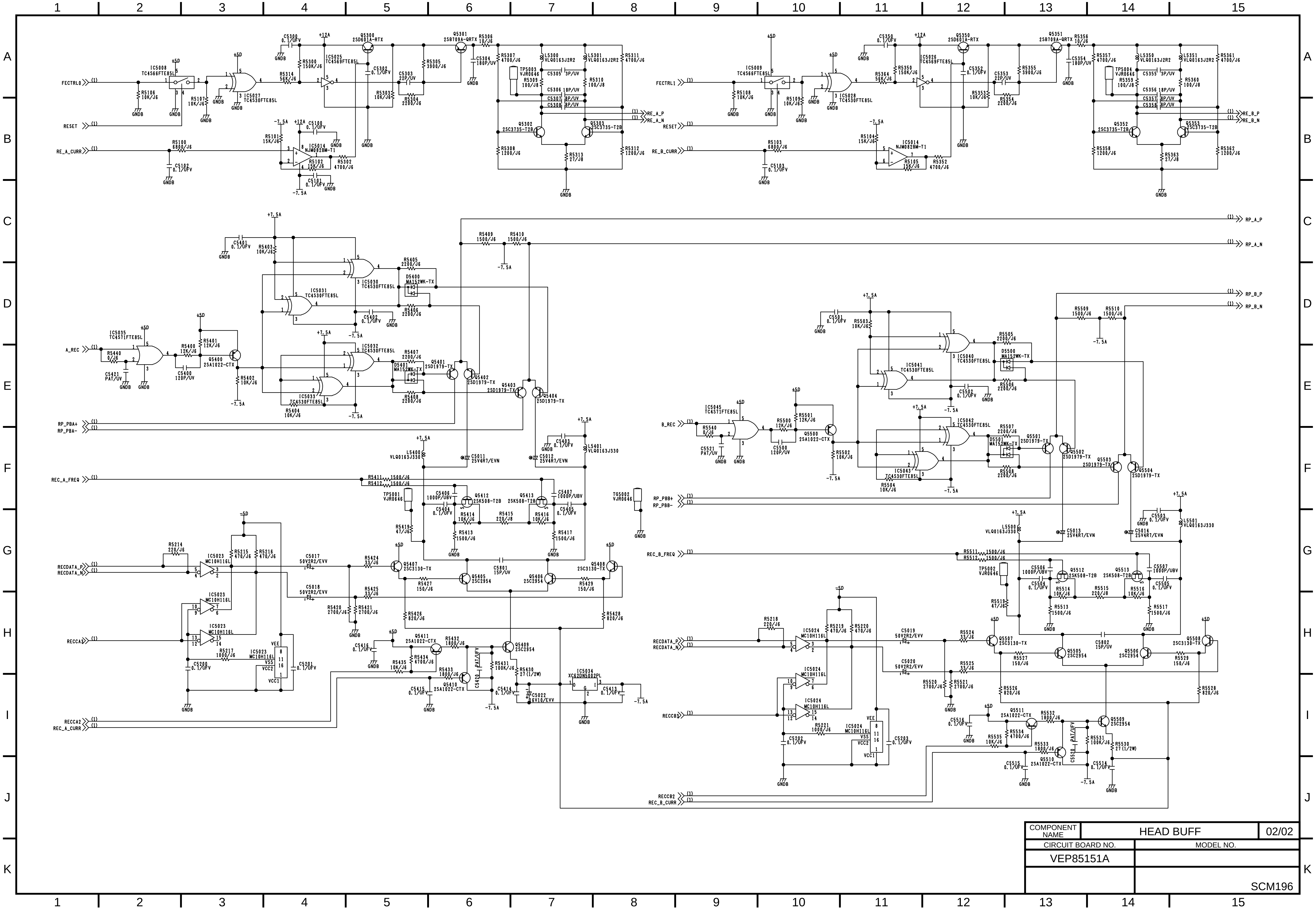


RF AMP(P1-10A)
8A FECTRL 0
RF AMP(P1-7B)
7A RE A CURR
RF AMP(P1-13B)
11A RESET
RF AMP(P1-10B)
8B FECTRL 1
RF AMP(P1-7C)
7B RE B CURR
RF AMP(P1-12C)
10A RECA
RF AMP(P1-15B)
17A REC A CURR
RF AMP(P1-16B)
18A REC A FREQ
RF AMP(P1-12A)
9A A REC
RF AMP(P1-14B)
13A REC DATA P
RF AMP(P1-14C)
13B REC DATA N
RF AMP(P1-17B)
20A RP A
RF AMP(P1-17C)
20B RP B
RF AMP(P1-15C)
17B REC B CURR
RF AMP(P1-16C)
18B REC B FREQ
RF AMP(P1-12B)
9B B REC
RF AMP(P1-18B)
21A PB A
RF AMP(P1-18C)
21B PB B
IC5027,IC5008,
Q5300,
IC5025,Q5301<2>
RE CONTROL
Q5302,
Q5303<2>
RE OSC Lch
IC5014<2>
BUFFER
IC5009,Q5350,
IC5026,IC5028,
Q5351<2>
RE CONTROL
Q5352,
Q5353<2>
RE OSC Rch
IC5014<2>
BUFFER
P5002
1 GND
2 GND
3 RP A N
4 RP A P
5 RP B N
6 RP B P
7 GND
8 RE A N
9 RE A P
10 RE B N
11 RE B P
12 GND
13 GND
GNDB
P5003
GND 1
GND 2
PB A N 3
PB A P 4
GND 5
GND 6
PB B N 7
PB B P 8
GND 9
GND 10
GNDA
IC5050<1>
HEAD AMP
3
2
6
5
10
9
Q5600
Q5601<1>
BUFFER
PB PRE P 25A
PB PRE N 25B
RF AMP(P1-25B)
RF AMP(P1-25C)
IC5003<1>
3
4
Q5200<1>
Q5401
5404
<2>
BUFFER
IC5023<2>
REC AMP
Q5405,5406
5409<2>
R/P SW
IC5060
<1>
2
3
5
6
HEAD AMP
Q5700
Q5701<1>
BUFFER
RP PRE P 23A
RP PRE N 23B
RF AMP(P1-27B)
RF AMP(P1-27C)
IC5003<1>
1
2
Q5201<1>
BUFFER
IC5024<2>
REC AMP
Q5505,5506
5509<2>
R/P SW
Q5501-5504
<2>

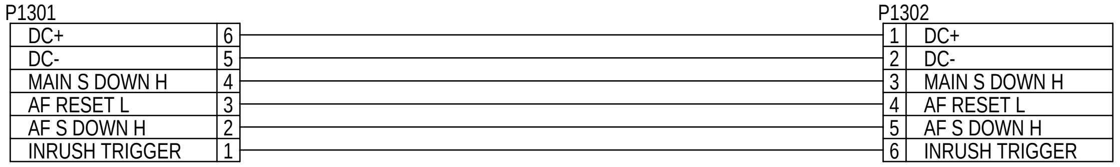


IC5050 UPC5102GS030
IC5060 UPC5102GS030
Q5600 XN5531-TX
Q5601 XN5531-TX
Q5700 XN5531-TX
Q5701 XN5531-TX
+5A
-5A
GNDA
GNDB
PB_A_P
PB_A_N
PB_B_P
PB_B_N
PB_B
PB_A
PB_PRE_2P
PB_PRE_2N
RP_PBA
RP_PBB
RECA
RP_B
RP_A
RP_PRE_2P
RP_PRE_2N
A_REC
B_REC
+5D
IC5003 MC74HC04AF-R
Q5200 2SA1022-CTX
Q5201 2SA1022-CTX
RECCA2
RECCA3
RECCB2
RECCB3
-5D
+12V
+5V
-5V
+7.5V
-7.5V
FL5001 VLF1016A470T
FL5002 VLF1016A470T
FL5003 VLF1016A470T
FL5004 VLF1016A470T
FL5005 VLF1016A470T
IC5010 XC62AP5002PL
IC5011 XC62DN5002PL
+12A
+7.5A
-7.5A
P5001 VJS3375B060
RE_A_CURR
FECTRL0
RE_B_CURR
FECTRL1
RESET
REC_TESTMOD
RECDATA_P
RECDATA_N
REC_A_CURR
REC_A_FREQ
REC_B_CURR
REC_B_FREQ
RP_PRE_P
RP_PRE_N
PB_PRE_P
PB_PRE_N
P5002 VJS3900C013
P5003 VJS3900C010
RP_A_N
RP_A_P
RP_B_N
RP_B_P
RE_A_N
RE_A_P
RE_B_N
RE_B_P
TG5001 VJR0646
C5060 0.1/UFV

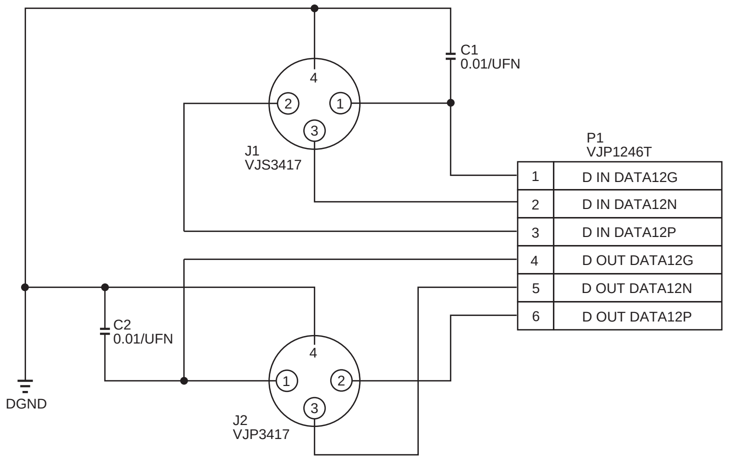
COMPONENT NAME	HEAD BUFF	01/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP85151A		
	SCM195	


FECTRL0
RESET
RE_A_CURR
IC5008 TC4S66FTE85L
IC5027 TC4S30FTE85L
IC5025 TC4S69FTE85L
IC5014 NJM082BM-T1
Q5300 2SD601A-RTX
Q5301 2SB709A-QRTX
Q5302 2SC3735-T2B
Q5303 2SC3735-T2B
TP5003 VJR0646
RE_A_P
RE_A_N
FECTRL1
RE_B_CURR
IC5009 TC4S66FTE85L
IC5028 TC4S30FTE85L
IC5026 TC4S69FTE85L
Q5350 2SD601A-RTX
Q5351 2SB709A-QRTX
Q5352 2SC3735-T2B
Q5353 2SC3735-T2B
TP5004 VJR0646
RE_B_P
RE_B_N
RP_A_P
RP_A_N
A_REC
IC5035 TC4S71FTE85L
IC5030 TC4S30FTE85L
IC5031 TC4S30FTE85L
IC5032 TC4S30FTE85L
IC5033 TC4S30FTE85L
Q5400 2SA1022-CTX
Q5401 2SD1979-TX
Q5402 2SD1979-TX
Q5403 2SD1979-TX
Q5404 2SD1979-TX
RP_PBA+
RP_PBA-
RP_B_P
RP_B_N
B_REC
IC5045 TC4S71FTE85L
IC5040 TC4S30FTE85L
IC5041 TC4S30FTE85L
IC5042 TC4S30FTE85L
IC5043 TC4S30FTE85L
Q5500 2SA1022-CTX
Q5501 2SD1979-TX
Q5502 2SD1979-TX
Q5503 2SD1979-TX
Q5504 2SD1979-TX
REC_A_FREQ
TP5001 VJR0646
Q5412 2SK508-T2B
Q5413 2SK508-T2B
RP_PBB+
RP_PBB-
TP5002 VJR0646
REC_B_FREQ
Q5512 2SK508-T2B
Q5513 2SK508-T2B
RECDATA_P
RECDATA_N
RECCA1
IC5023 MC10H116L
Q5407 2SC3130-TX
Q5405 2SC2954
Q5406 2SC2954
Q5408 2SC3130-TX
Q5409 2SC2954
Q5410 2SA1022-CTX
Q5411 2SA1022-CTX
IC5034 XC62DN5002PL
RECCA2
REC_A_CURR
RECDATA_P
RECDATA_N
RECCB1
IC5024 MC10H116L
Q5507 2SC3130-TX
Q5505 2SC2954
Q5506 2SC2954
Q5508 2SC3130-TX
Q5509 2SC2954
Q5510 2SA1022-CTX
Q5511 2SA1022-CTX
RECCB2
REC_B_CURR
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

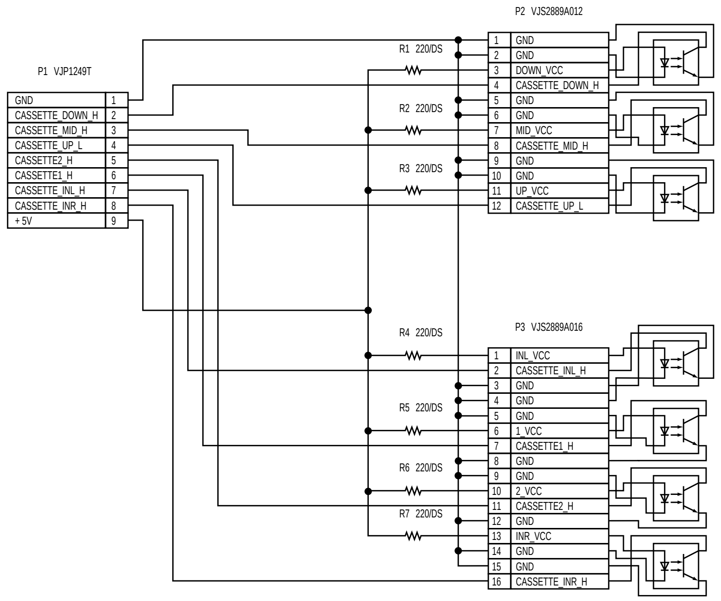
COMPONENT NAME	HEAD BUFF	02/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP85151A		
	SCM196	


P1301
DC+ 6
DC- 5
MAIN S DOWN H 4
AF RESET L 3
AF S DOWN H 2
INRUSH TRIGGER 1
P1302
1 DC+
2 DC-
3 MAIN S DOWN H
4 AF RESET L
5 AF S DOWN H
6 INRUSH TRIGGER

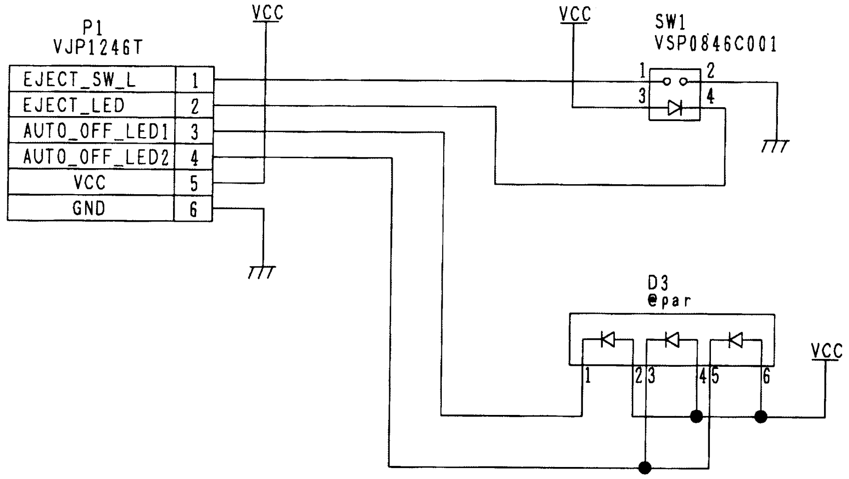
COMPONENT NAME	POWER CONNECT	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A58A		
	SCM232	


C1
0.01/UFN
4
2
1
3
J1
VJS3417
P1
VJP1246T
1 D IN DATA12G
2 D IN DATA12N
3 D IN DATA12P
4 D OUT DATA12G
5 D OUT DATA12N
6 D OUT DATA12P
C2
0.01/UFN
4
1
2
3
DGND
J2
VJP3417

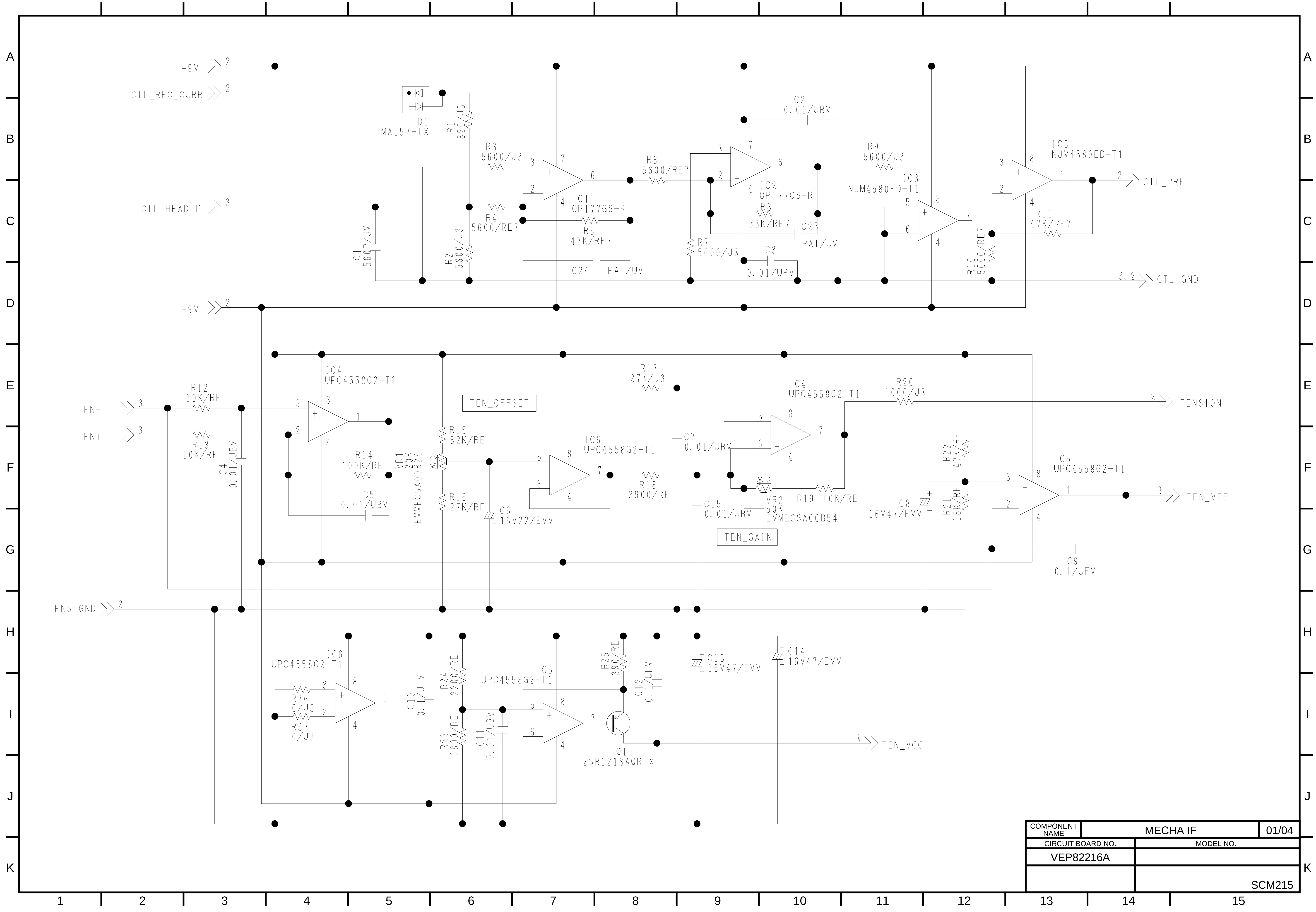
COMPONENT NAME	AES/EBU	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP84157		
	SCM234	


P2 VJS2889A012
P1 VJP1249T
GND 1
CASSETTE_DOWN_H 2
CASSETTE_MID_H 3
CASSETTE_UP_L 4
CASSETTE2_H 5
CASSETTE1_H 6
CASSETTE_INL_H 7
CASSETTE_INR_H 8
+ 5V 9
R1 220/DS
R2 220/DS
R3 220/DS
1 GND
2 GND
3 DOWN_VCC
4 CASSETTE_DOWN_H
5 GND
6 GND
7 MID_VCC
8 CASSETTE_MID_H
9 GND
10 GND
11 UP_VCC
12 CASSETTE_UP_L
P3 VJS2889A016
R4 220/DS
R5 220/DS
R6 220/DS
R7 220/DS
1 INL_VCC
2 CASSETTE_INL_H
3 GND
4 GND
5 GND
6 1_VCC
7 CASSETTE1_H
8 GND
9 GND
10 2_VCC
11 CASSETTE2_H
12 GND
13 INR_VCC
14 GND
15 GND
16 CASSETTE_INR_H

COMPONENT NAME	CARRIGE	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80856A		
	SCM233	


P1
VJP1246T
EJECT_SW_L 1
EJECT_LED 2
AUTO_OFF_LED1 3
AUTO_OFF_LED2 4
VCC 5
GND 6
VCC
VCC
SW1
VSP0846C001
1
2
3
4
D3
@par
1
2
3
4
5
6
VCC

COMPONENT NAME	UP FRONT 2	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP80852A		
	SCM235	


+9V
CTL_REC_CURR
D1
MA157-TX
R1
820/J3
R3
5600/J3
IC1
OP177GS-R
R4
5600/RE7
R5
47K/RE7
CTL_HEAD_P
C1
560P/UV
R2
5600/J3
C24
PAT/UV
R6
5600/RE7
C2
0.01/UBV
IC2
OP177GS-R
R8
33K/RE7
C25
PAT/UV
R7
5600/J3
C3
0.01/UBV
R9
5600/J3
IC3
NJM4580ED-T1
IC3
NJM4580ED-T1
R11
47K/RE7
R10
5600/RE7
CTL_PRE
3,2
CTL_GND
-9V
IC4
UPC4558G2-T1
R12
10K/RE
TEN-
TEN+
R13
10K/RE
C4
0.01/UBV
R14
100K/RE
C5
0.01/UBV
VR1
20K
EVMECSA00B24
R15
82K/RE
R16
27K/RE
C6
16V22/EVV
TEN_OFFSET
IC6
UPC4558G2-T1
R17
27K/J3
C7
0.01/UBV
R18
3900/RE
C15
0.01/UBV
IC4
UPC4558G2-T1
VR2
50K
EVMECSA00B54
CW
R19
10K/RE
TEN_GAIN
R20
1000/J3
TENSION
R22
47K/RE
R21
18K/RE
C8
16V47/EVV
IC5
UPC4558G2-T1
TEN_VEE
C9
0.1/UFV
TENS_GND
IC6
UPC4558G2-T1
R36
0/J3
R37
0/J3
C10
0.1/UFV
R24
2200/RE
R23
6800/RE
C11
0.01/UBV
IC5
UPC4558G2-T1
R25
390/RE
Q1
2SB1218AQRTX
C12
0.1/UFV
C13
16V47/EVV
C14
16V47/EVV
TEN_VCC
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
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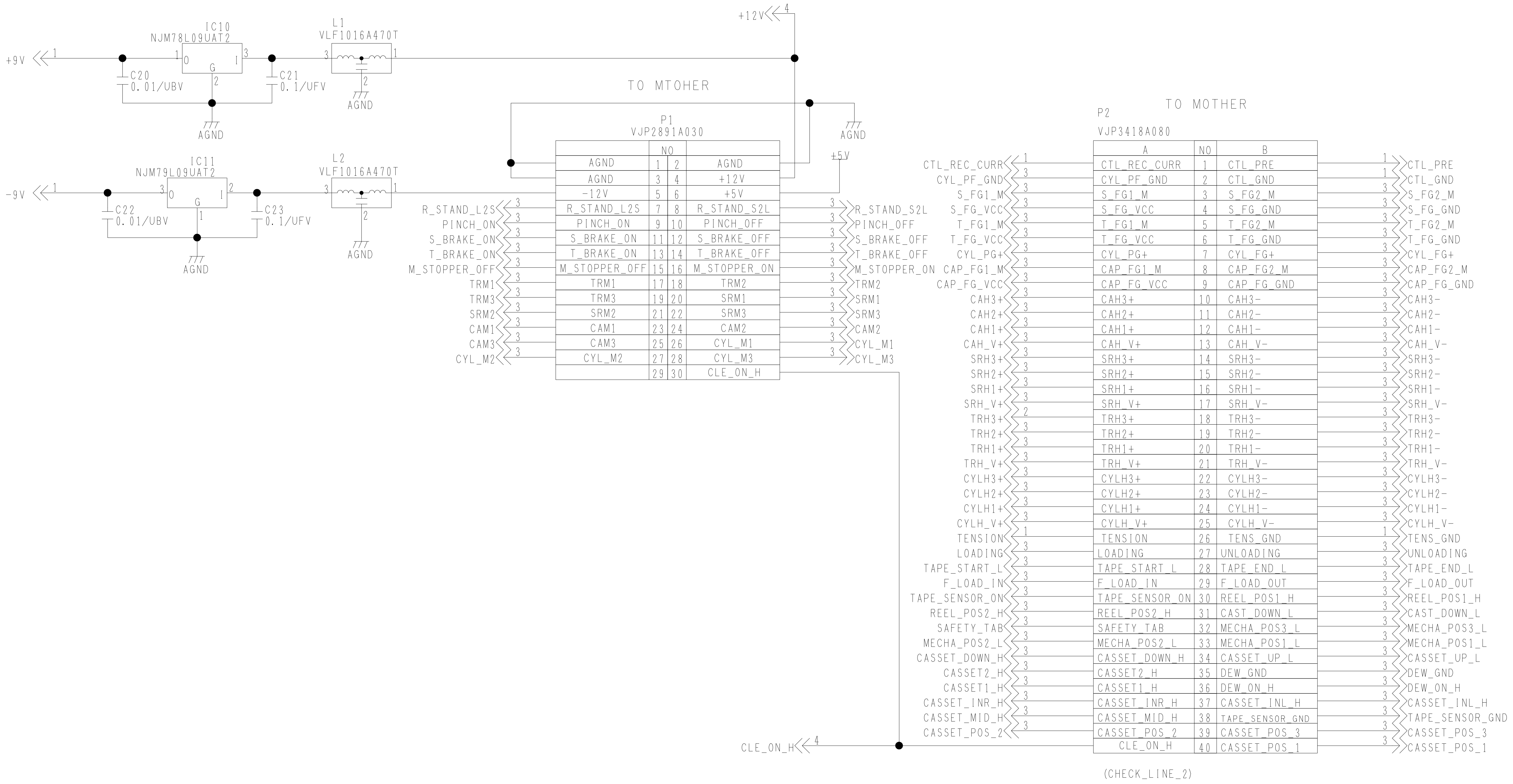
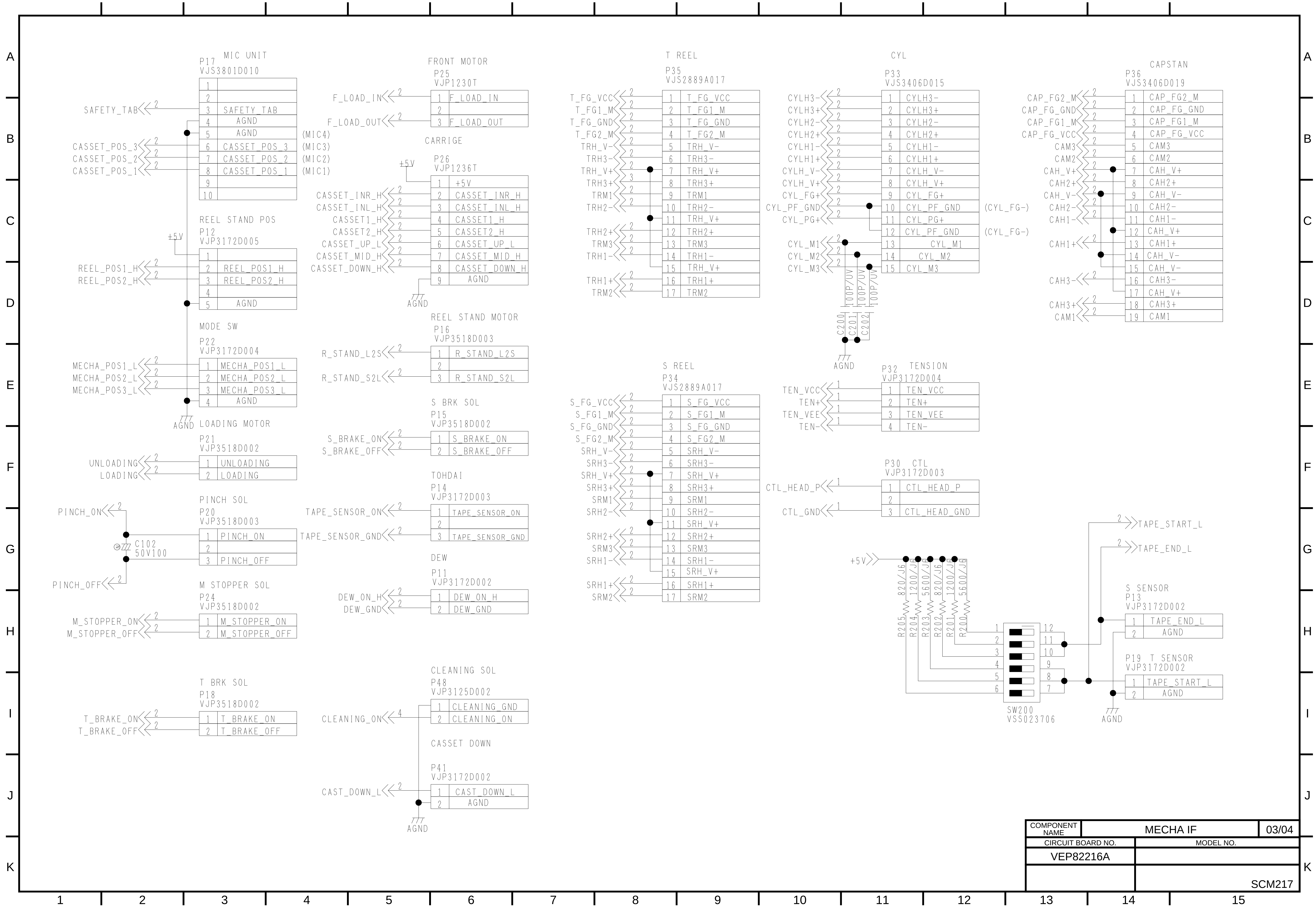
15

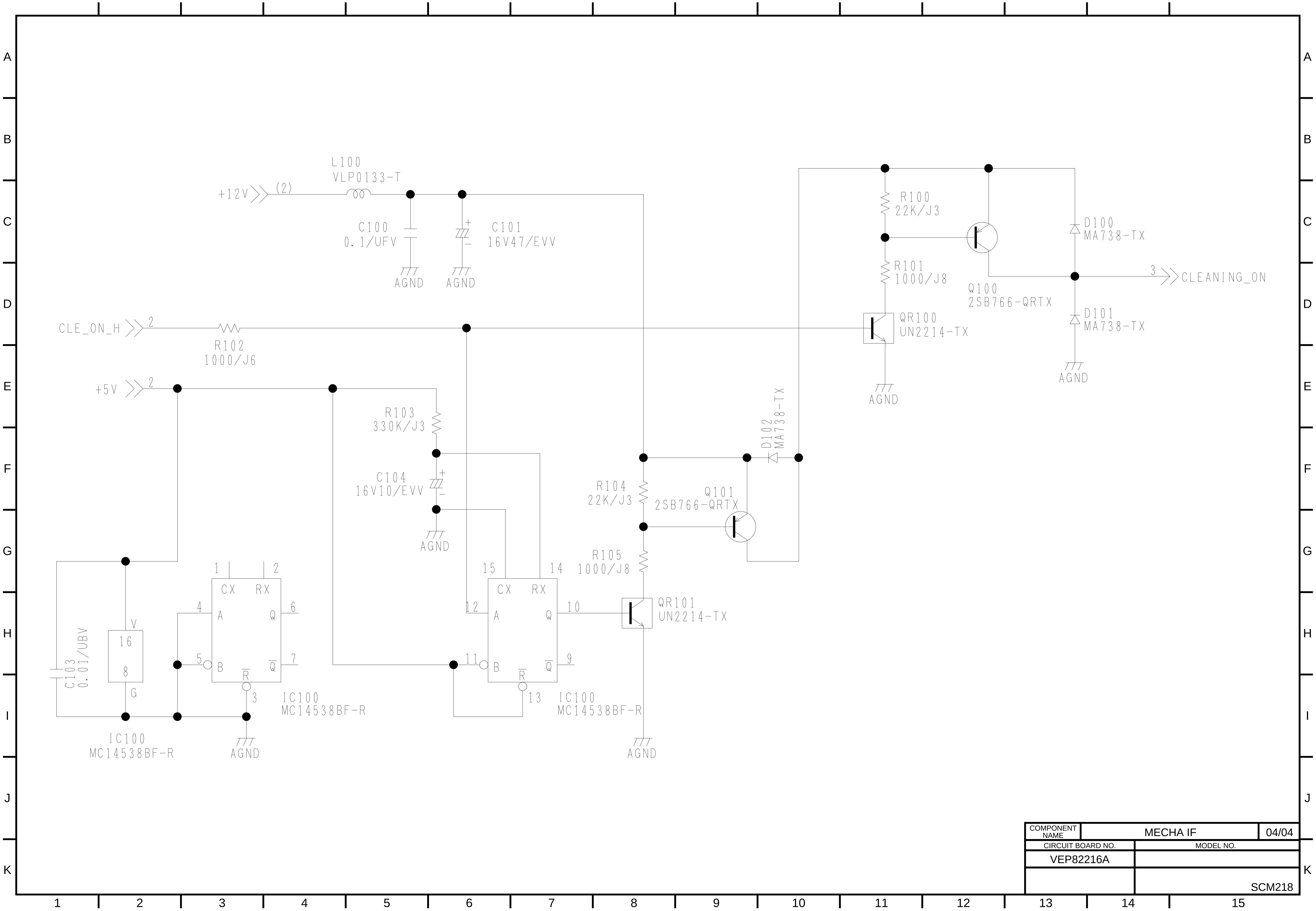
COMPONENT NAME	MECHA IF		01/04
CIRCUIT BOARD NO.		MODEL NO.	
VEP82216A			
		SCM215	


+9V
IC10
NJM78L09UAT2
C20
0.01/UBV
C21
0.1/UFV
AGND
L1
VLF1016A470T
-9V
IC11
NJM79L09UAT2
C22
0.01/UBV
C23
0.1/UFV
L2
VLF1016A470T
+12V
+5V
TO MTOHER
P1
VJP2891A030
NO
AGND 1 2 AGND
AGND 3 4 +12V
-12V 5 6 +5V
R_STAND_L2S 7 8 R_STAND_S2L
PINCH_ON 9 10 PINCH_OFF
S_BRAKE_ON 11 12 S_BRAKE_OFF
T_BRAKE_ON 13 14 T_BRAKE_OFF
M_STOPPER_OFF 15 16 M_STOPPER_ON
TRM1 17 18 TRM2
TRM3 19 20 SRM1
SRM2 21 22 SRM3
CAM1 23 24 CAM2
CAM3 25 26 CYL_M1
CYL_M2 27 28 CYL_M3
29 30 CLE_ON_H
CLE_ON_H
TO MOTHER
P2
VJP3418A080
A NO B
CTL_REC_CURR 1 CTL_PRE
CYL_PF_GND 2 CTL_GND
S_FG1_M 3 S_FG2_M
S_FG_VCC 4 S_FG_GND
T_FG1_M 5 T_FG2_M
T_FG_VCC 6 T_FG_GND
CYL_PG+ 7 CYL_FG+
CAP_FG1_M 8 CAP_FG2_M
CAP_FG_VCC 9 CAP_FG_GND
CAH3+ 10 CAH3-
CAH2+ 11 CAH2-
CAH1+ 12 CAH1-
CAH_V+ 13 CAH_V-
SRH3+ 14 SRH3-
SRH2+ 15 SRH2-
SRH1+ 16 SRH1-
SRH_V+ 17 SRH_V-
TRH3+ 18 TRH3-
TRH2+ 19 TRH2-
TRH1+ 20 TRH1-
TRH_V+ 21 TRH_V-
CYLH3+ 22 CYLH3-
CYLH2+ 23 CYLH2-
CYLH1+ 24 CYLH1-
CYLH_V+ 25 CYLH_V-
TENSION 26 TENS_GND
LOADING 27 UNLOADING
TAPE_START_L 28 TAPE_END_L
F_LOAD_IN 29 F_LOAD_OUT
TAPE_SENSOR_ON 30 REEL_POS1_H
REEL_POS2_H 31 CAST_DOWN_L
SAFETY_TAB 32 MECHA_POS3_L
MECHA_POS2_L 33 MECHA_POS1_L
CASSET_DOWN_H 34 CASSET_UP_L
CASSET2_H 35 DEW_GND
CASSET1_H 36 DEW_ON_H
CASSET_INR_H 37 CASSET_INL_H
CASSET_MID_H 38 TAPE_SENSOR_GND
CASSET_POS_2 39 CASSET_POS_3
CLE_ON_H 40 CASSET_POS_1
(CHECK_LINE_2)

COMPONENT NAME	MECHA IF	02/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP82216A		
	SCM216	

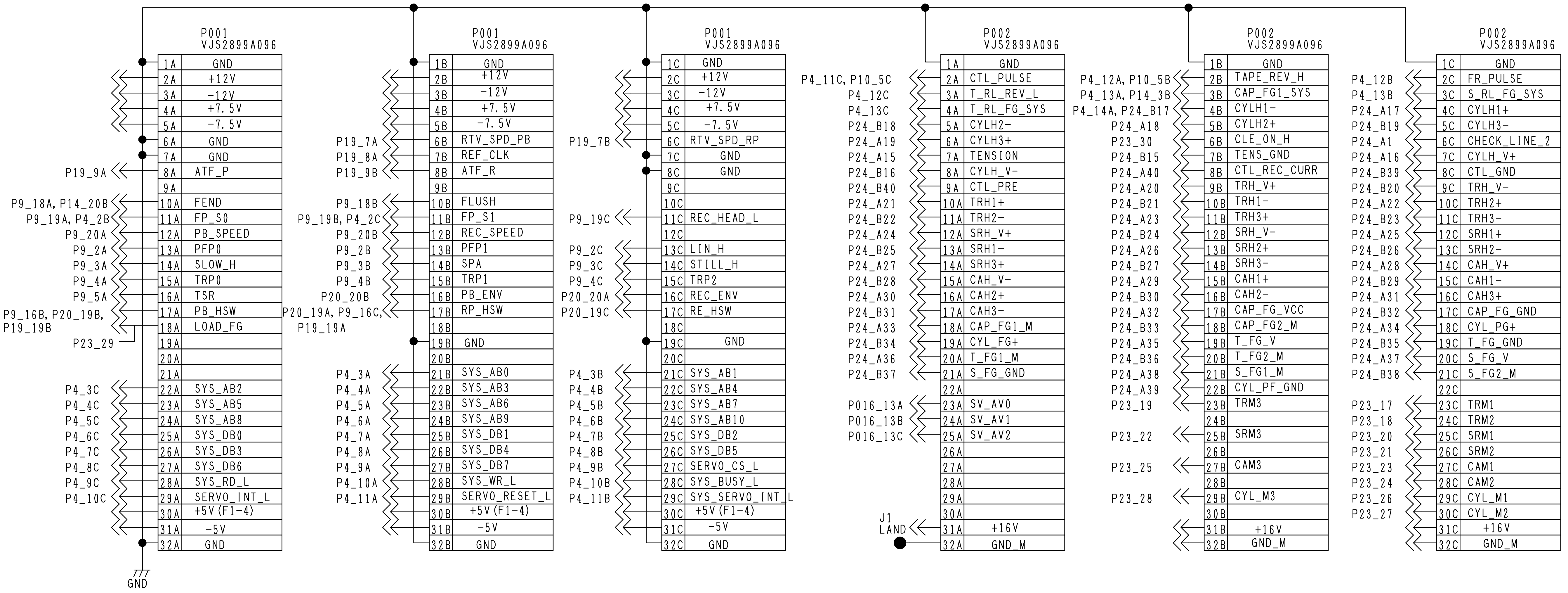

MIC UNIT
P17
VJS3801D010
SAFETY_TAB
AGND
CASSET_POS_3
CASSET_POS_2
CASSET_POS_1
(MIC4)
(MIC3)
(MIC2)
(MIC1)
REEL STAND POS
P12
VJP3172D005
+5V
REEL_POS1_H
REEL_POS2_H
MODE SW
P22
VJP3172D004
MECHA_POS1_L
MECHA_POS2_L
MECHA_POS3_L
LOADING MOTOR
P21
VJP3518D002
UNLOADING
LOADING
PINCH SOL
P20
VJP3518D003
PINCH_ON
PINCH_OFF
C102
50V100
M STOPPER SOL
P24
VJP3518D002
M_STOPPER_ON
M_STOPPER_OFF
T BRK SOL
P18
VJP3518D002
T_BRAKE_ON
T_BRAKE_OFF
FRONT MOTOR
P25
VJP1230T
F_LOAD_IN
F_LOAD_OUT
CARRIGE
P26
VJP1236T
CASSET_INR_H
CASSET_INL_H
CASSET1_H
CASSET2_H
CASSET_UP_L
CASSET_MID_H
CASSET_DOWN_H
REEL STAND MOTOR
P16
VJP3518D003
R_STAND_L2S
R_STAND_S2L
S BRK SOL
P15
VJP3518D002
S_BRAKE_ON
S_BRAKE_OFF
TOHDAI
P14
VJP3172D003
TAPE_SENSOR_ON
TAPE_SENSOR_GND
DEW
P11
VJP3172D002
DEW_ON_H
DEW_GND
CLEANING SOL
P48
VJP3125D002
CLEANING_GND
CLEANING_ON
CASSET DOWN
P41
VJP3172D002
CAST_DOWN_L
T REEL
P35
VJS2889A017
T_FG_VCC
T_FG1_M
T_FG_GND
T_FG2_M
TRH_V-
TRH3-
TRH_V+
TRH3+
TRM1
TRH2-
TRH2+
TRM3
TRH1-
TRH1+
TRM2
S REEL
P34
VJS2889A017
S_FG_VCC
S_FG1_M
S_FG_GND
S_FG2_M
SRH_V-
SRH3-
SRH_V+
SRH3+
SRM1
SRH2-
SRH2+
SRM3
SRH1-
SRH1+
SRM2
CYL
P33
VJS3406D015
CYLH3-
CYLH3+
CYLH2-
CYLH2+
CYLH1-
CYLH1+
CYLH_V-
CYLH_V+
CYL_FG+
CYL_PF_GND
CYL_PG+
(CYL_FG-)
CYL_M1
CYL_M2
CYL_M3
100P/UV
C200
C201
C202
P32 TENSION
VJP3172D004
TEN_VCC
TEN+
TEN_VEE
TEN-
P30 CTL
VJP3172D003
CTL_HEAD_P
CTL_GND
CTL_HEAD_GND
CAPSTAN
P36
VJS3406D019
CAP_FG2_M
CAP_FG_GND
CAP_FG1_M
CAP_FG_VCC
CAM3
CAM2
CAH_V+
CAH2+
CAH_V-
CAH2-
CAH1-
CAH1+
CAH3-
CAH3+
CAM1
TAPE_START_L
TAPE_END_L
+5V
R205 820/J6
R204 1200/J6
R203 5600/J6
R202 820/J6
R201 1200/J6
R200 5600/J6
SW200
VSS023706
S SENSOR
P13
VJP3172D002
TAPE_END_L
P19 T SENSOR
VJP3172D002
TAPE_START_L
AGND

COMPONENT NAME	MECHA IF	03/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP82216A		
	SCM217	


L100
VLP0133-T
+12V
(2)
C100
0.1/UFV
C101
16V47/EVV
AGND
AGND
CLE_ON_H
2
R102
1000/J6
+5V
2
R103
330K/J3
C104
16V10/EVV
AGND
R100
22K/J3
R101
1000/J8
Q100
2SB766-QRTX
D100
MA738-TX
D101
MA738-TX
3
CLEANING_ON
QR100
UN2214-TX
AGND
AGND
D102
MA738-TX
R104
22K/J3
Q101
2SB766-QRTX
R105
1000/J8
QR101
UN2214-TX
AGND
C103
0.01/UBV
V
16
8
G
IC100
MC14538BF-R
AGND
1
2
CX
RX
4
A
Q
6
5
B
Q
7
R
3
IC100
MC14538BF-R
15
14
CX
RX
12
A
Q
10
11
B
Q
9
R
13
IC100
MC14538BF-R
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

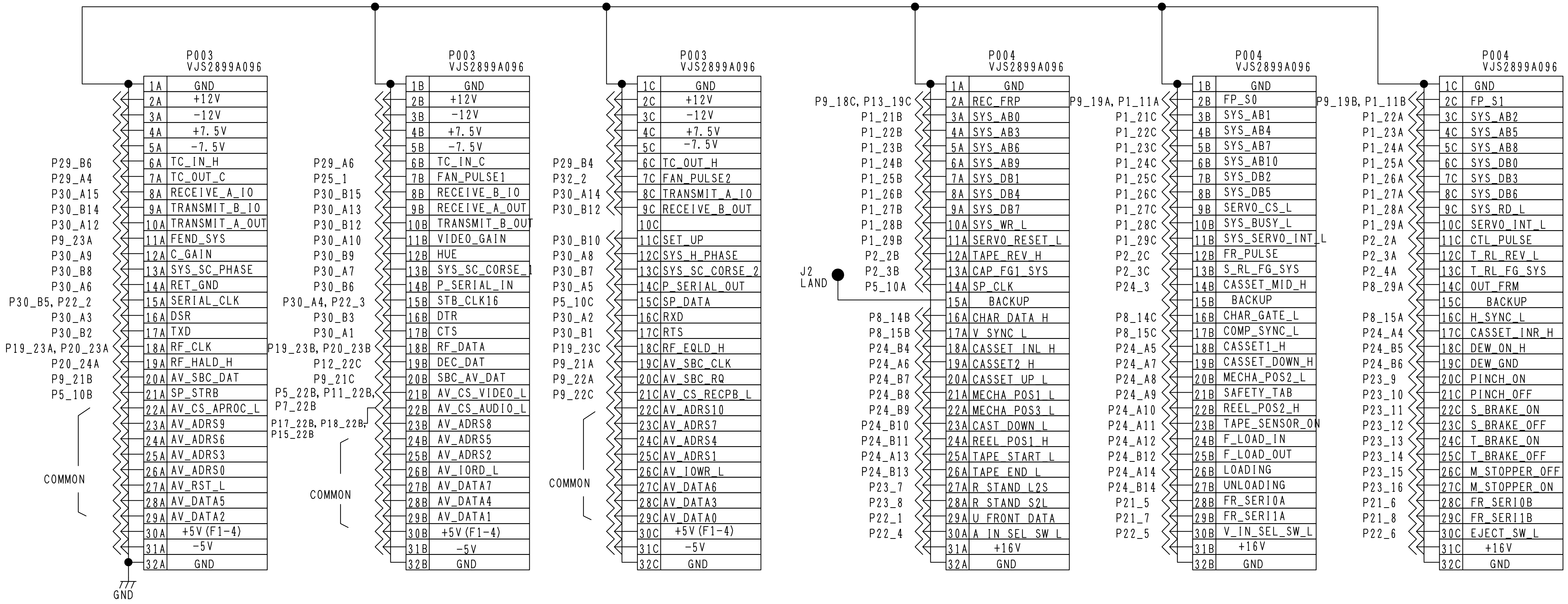
COMPONENT NAME	MECHA IF	04/04
CIRCUIT BOARD NO.	MODEL NO.	
VEP82216A		
	SCM218	

SERVO (F1)


P001
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A GND
7A GND
P19_9A
8A ATF_P
9A
P9_18A, P14_20B
10A FEND
P9_19A, P4_2B
11A FP_S0
P9_20A
12A PB_SPEED
P9_2A
13A PFP0
P9_3A
14A SLOW_H
P9_4A
15A TRP0
P9_5A
16A TSR
P9_16B, P20_19B,
P19_19B
17A PB_HSW
18A LOAD_FG
P23_29
19A
20A
21A
P4_3C
22A SYS_AB2
P4_4C
23A SYS_AB5
P4_5C
24A SYS_AB8
P4_6C
25A SYS_DB0
P4_7C
26A SYS_DB3
P4_8C
27A SYS_DB6
P4_9C
28A SYS_RD_L
P4_10C
29A SERVO_INT_L
30A +5V (F1-4)
31A -5V
32A GND
GND
P001
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
P19_7A
6B RTV_SPD_PB
P19_8A
7B REF_CLK
P19_9B
8B ATF_R
9B
P9_18B
10B FLUSH
P9_19B, P4_2C
11B FP_S1
P9_20B
12B REC_SPEED
P9_2B
13B PFP1
P9_3B
14B SPA
P9_4B
15B TRP1
P20_20B
16B PB_ENV
P20_19A, P9_16C,
P19_19A
17B RP_HSW
18B
19B GND
20B
P4_3A
21B SYS_AB0
P4_4A
22B SYS_AB3
P4_5A
23B SYS_AB6
P4_6A
24B SYS_AB9
P4_7A
25B SYS_DB1
P4_8A
26B SYS_DB4
P4_9A
27B SYS_DB7
P4_10A
28B SYS_WR_L
P4_11A
29B SERVO_RESET_L
30B +5V (F1-4)
31B -5V
32B GND
P001
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P19_7B
6C RTV_SPD_RP
7C GND
8C GND
9C
10C
P9_19C
11C REC_HEAD_L
12C
P9_2C
13C LIN_H
P9_3C
14C STILL_H
P9_4C
15C TRP2
P20_20A
16C REC_ENV
P20_19C
17C RE_HSW
18C
19C GND
20C
P4_3B
21C SYS_AB1
P4_4B
22C SYS_AB4
P4_5B
23C SYS_AB7
P4_6B
24C SYS_AB10
P4_7B
25C SYS_DB2
P4_8B
26C SYS_DB5
P4_9B
27C SERVO_CS_L
P4_10B
28C SYS_BUSY_L
P4_11B
29C SYS_SERVO_INT_L
30C +5V (F1-4)
31C -5V
32C GND
P002
VJS2899A096
1A GND
P4_11C, P10_5C
2A CTL_PULSE
P4_12C
3A T_RL_REV_L
P4_13C
4A T_RL_FG_SYS
P24_B18
5A CYLH2-
P24_A19
6A CYLH3+
P24_A15
7A TENSION
P24_B16
8A CYLH_V-
P24_B40
9A CTL_PRE
P24_A21
10A TRH1+
P24_B22
11A TRH2-
P24_A24
12A SRH_V+
P24_B25
13A SRH1-
P24_A27
14A SRH3+
P24_B28
15A CAH_V-
P24_A30
16A CAH2+
P24_B31
17A CAH3-
P24_A33
18A CAP_FG1_M
P24_B34
19A CYL_FG+
P24_A36
20A T_FG1_M
P24_B37
21A S_FG_GND
22A
P016_13A
23A SV_AV0
P016_13B
24A SV_AV1
P016_13C
25A SV_AV2
26A
27A
28A
29A
30A
J1
LAND
31A +16V
32A GND_M
P002
VJS2899A096
1B GND
P4_12A, P10_5B
2B TAPE_REV_H
P4_13A, P14_3B
3B CAP_FG1_SYS
P4_14A, P24_B17
4B CYLH1-
P24_A18
5B CYLH2+
P23_30
6B CLE_ON_H
P24_B15
7B TENS_GND
P24_A40
8B CTL_REC_CURR
P24_A20
9B TRH_V+
P24_B21
10B TRH1-
P24_A23
11B TRH3+
P24_B24
12B SRH_V-
P24_A26
13B SRH2+
P24_B27
14B SRH3-
P24_A29
15B CAH1+
P24_B30
16B CAH2-
P24_A32
17B CAP_FG_VCC
P24_B33
18B CAP_FG2_M
P24_A35
19B T_FG_V
P24_B36
20B T_FG2_M
P24_A38
21B S_FG1_M
P24_A39
22B CYL_PF_GND
P23_19
23B TRM3
24B
P23_22
25B SRM3
26B
P23_25
27B CAM3
28B
P23_28
29B CYL_M3
30B
31B +16V
32B GND_M
P002
VJS2899A096
1C GND
P4_12B
2C FR_PULSE
P4_13B
3C S_RL_FG_SYS
P24_A17
4C CYLH1+
P24_B19
5C CYLH3-
P24_A1
6C CHECK_LINE_2
P24_A16
7C CYLH_V+
P24_B39
8C CTL_GND
P24_B20
9C TRH_V-
P24_A22
10C TRH2+
P24_B23
11C TRH3-
P24_A25
12C SRH1+
P24_B26
13C SRH2-
P24_A28
14C CAH_V+
P24_B29
15C CAH1-
P24_A31
16C CAH3+
P24_B32
17C CAP_FG_GND
P24_A34
18C CYL_PG+
P24_B35
19C T_FG_GND
P24_A37
20C S_FG_V
P24_B38
21C S_FG2_M
22C
P23_17
23C TRM1
P23_18
24C TRM2
P23_20
25C SRM1
P23_21
26C SRM2
P23_23
27C CAM1
P23_24
28C CAM2
P23_26
29C CYL_M1
P23_27
30C CYL_M2
31C +16V
32C GND_M

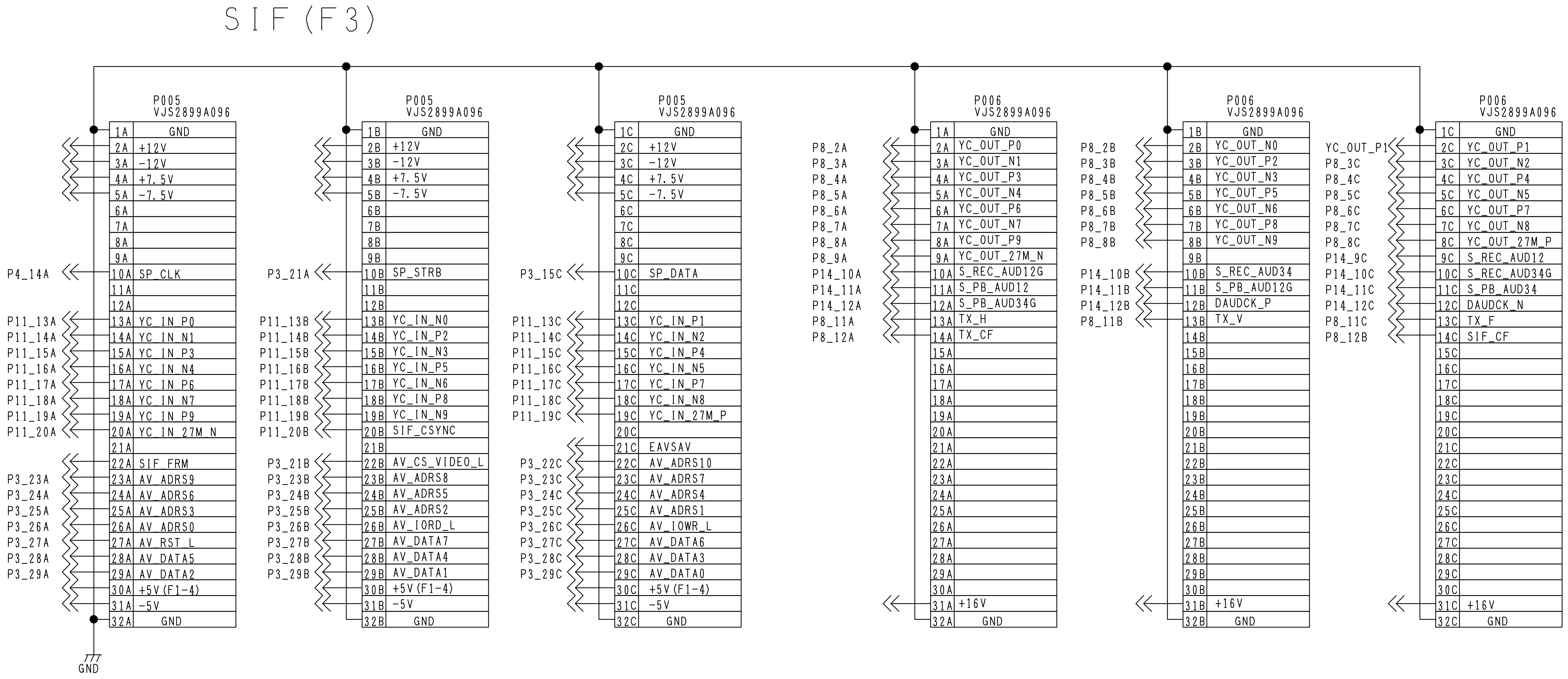
COMPONENT NAME	MOTHER		01/11
CIRCUIT BOARD NO.		MODEL NO.	
VEP80A48A			
		SCM197	

SYSCON (F2)

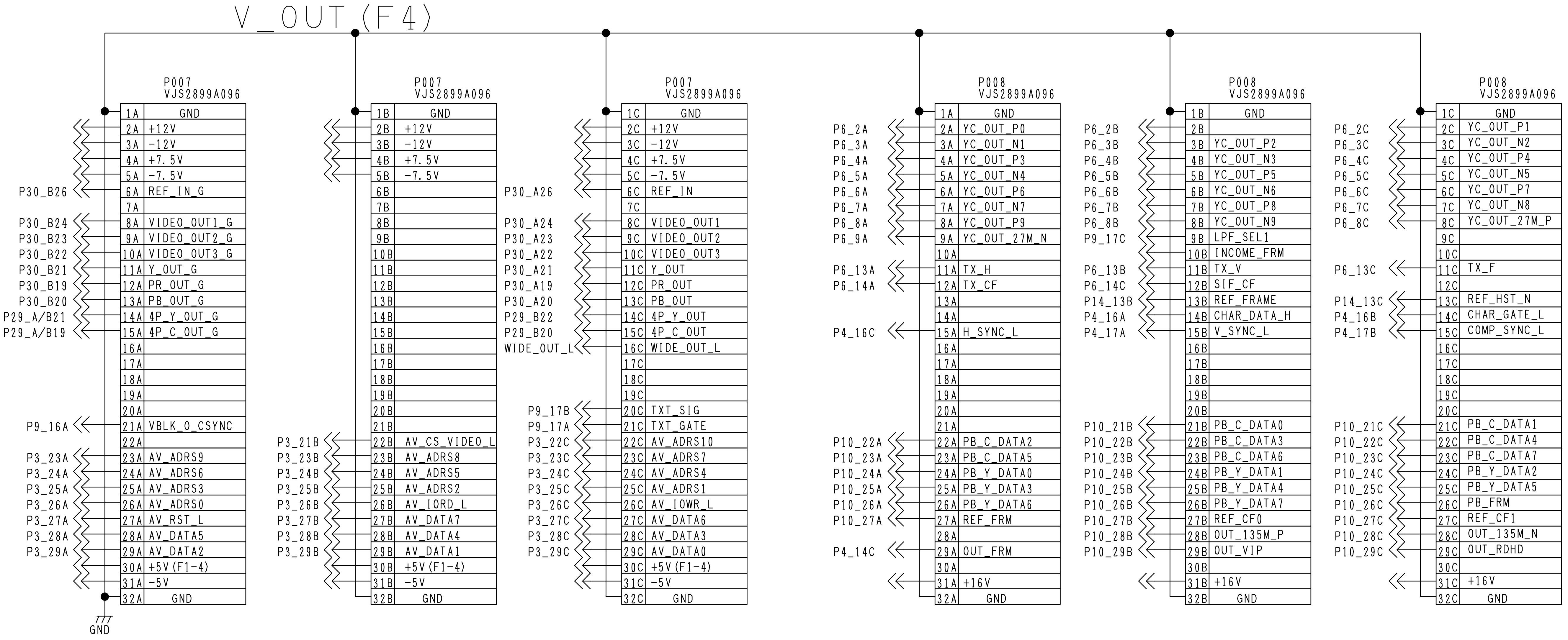


P003
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P29_B6 6A TC_IN_H
P29_A4 7A TC_OUT_C
P30_A15 8A RECEIVE_A_IO
P30_B14 9A TRANSMIT_B_IO
P30_A12 10A TRANSMIT_A_OUT
P9_23A 11A FEND_SYS
P30_A9 12A C_GAIN
P30_B8 13A SYS_SC_PHASE
P30_A6 14A RET_GND
P30_B5, P22_2 15A SERIAL_CLK
P30_A3 16A DSR
P30_B2 17A TXD
P19_23A, P20_23A 18A RF_CLK
P20_24A 19A RF_HALD_H
P9_21B 20A AV_SBC_DAT
P5_10B 21A SP_STRB
22A AV_CS_APROC_L
23A AV_ADRS9
24A AV_ADRS6
25A AV_ADRS3
26A AV_ADRS0
27A AV_RST_L
28A AV_DATA5
29A AV_DATA2
30A +5V (F1-4)
31A -5V
32A GND
COMMON
GND
P003
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
P29_A6 6B TC_IN_C
P25_1 7B FAN_PULSE1
P30_B15 8B RECEIVE_B_IO
P30_A13 9B RECEIVE_A_OUT
P30_B12 10B TRANSMIT_B_OUT
P30_A10 11B VIDEO_GAIN
P30_B9 12B HUE
P30_A7 13B SYS_SC_CORSE_1
P30_B6 14B P_SERIAL_IN
P30_A4, P22_3 15B STB_CLK16
P30_B3 16B DTR
P30_A1 17B CTS
P19_23B, P20_23B 18B RF_DATA
P12_22C 19B DEC_DAT
P9_21C 20B SBC_AV_DAT
P5_22B, P11_22B, P7_22B 21B AV_CS_VIDEO_L
22B AV_CS_AUDIO_L
P17_22B, P18_22B, P15_22B 23B AV_ADRS8
24B AV_ADRS5
25B AV_ADRS2
26B AV_IORD_L
27B AV_DATA7
28B AV_DATA4
29B AV_DATA1
30B +5V (F1-4)
31B -5V
32B GND
COMMON
P003
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P29_B4 6C TC_OUT_H
P32_2 7C FAN_PULSE2
P30_A14 8C TRANSMIT_A_IO
P30_B12 9C RECEIVE_B_OUT
10C
P30_B10 11C SET_UP
P30_A8 12C SYS_H_PHASE
P30_B7 13C SYS_SC_CORSE_2
P30_A5 14C P_SERIAL_OUT
P5_10C 15C SP_DATA
P30_A2 16C RXD
P30_B1 17C RTS
P19_23C 18C RF_EQLD_H
P9_21A 19C AV_SBC_CLK
P9_22A 20C AV_SBC_RQ
P9_22C 21C AV_CS_RECPB_L
22C AV_ADRS10
23C AV_ADRS7
24C AV_ADRS4
25C AV_ADRS1
26C AV_IOWR_L
27C AV_DATA6
28C AV_DATA3
29C AV_DATA0
30C +5V (F1-4)
31C -5V
32C GND
COMMON
P004
VJS2899A096
1A GND
P9_18C, P13_19C 2A REC_FRP
P1_21B 3A SYS_AB0
P1_22B 4A SYS_AB3
P1_23B 5A SYS_AB6
P1_24B 6A SYS_AB9
P1_25B 7A SYS_DB1
P1_26B 8A SYS_DB4
P1_27B 9A SYS_DB7
P1_28B 10A SYS_WR_L
P1_29B 11A SERVO_RESET_L
P2_2B 12A TAPE_REV_H
P2_3B 13A CAP_FG1_SYS
P5_10A 14A SP_CLK
J2
LAND
15A BACKUP
P8_14B 16A CHAR_DATA_H
P8_15B 17A V_SYNC_L
P24_B4 18A CASSET_INL_H
P24_A6 19A CASSET2_H
P24_B7 20A CASSET_UP_L
P24_B8 21A MECHA_POS1_L
P24_B9 22A MECHA_POS3_L
P24_B10 23A CAST_DOWN_L
P24_B11 24A REEL_POS1_H
P24_A13 25A TAPE_START_L
P24_B13 26A TAPE_END_L
P23_7 27A R_STAND_L2S
P23_8 28A R_STAND_S2L
P22_1 29A U_FRONT_DATA
P22_4 30A A_IN_SEL_SW_L
31A +16V
32A GND
P004
VJS2899A096
1B GND
P9_19A, P1_11A 2B FP_S0
P1_21C 3B SYS_AB1
P1_22C 4B SYS_AB4
P1_23C 5B SYS_AB7
P1_24C 6B SYS_AB10
P1_25C 7B SYS_DB2
P1_26C 8B SYS_DB5
P1_27C 9B SERVO_CS_L
P1_28C 10B SYS_BUSY_L
P1_29C 11B SYS_SERVO_INT_L
P2_2C 12B FR_PULSE
P2_3C 13B S_RL_FG_SYS
P24_3 14B CASSET_MID_H
15B BACKUP
P8_14C 16B CHAR_GATE_L
P8_15C 17B COMP_SYNC_L
P24_A5 18B CASSET1_H
P24_A7 19B CASSET_DOWN_H
P24_A8 20B MECHA_POS2_L
P24_A9 21B SAFETY_TAB
P24_A10 22B REEL_POS2_H
P24_A11 23B TAPE_SENSOR_ON
P24_A12 24B F_LOAD_IN
P24_B12 25B F_LOAD_OUT
P24_A14 26B LOADING
P24_B14 27B UNLOADING
P21_5 28B FR_SERI0A
P21_7 29B FR_SERI1A
P22_5 30B V_IN_SEL_SW_L
31B +16V
32B GND
P004
VJS2899A096
1C GND
P9_19B, P1_11B 2C FP_S1
P1_22A 3C SYS_AB2
P1_23A 4C SYS_AB5
P1_24A 5C SYS_AB8
P1_25A 6C SYS_DB0
P1_26A 7C SYS_DB3
P1_27A 8C SYS_DB6
P1_28A 9C SYS_RD_L
P1_29A 10C SERVO_INT_L
P2_2A 11C CTL_PULSE
P2_3A 12C T_RL_REV_L
P2_4A 13C T_RL_FG_SYS
P8_29A 14C OUT_FRM
15C BACKUP
P8_15A 16C H_SYNC_L
P24_A4 17C CASSET_INR_H
P24_B5 18C DEW_ON_H
P24_B6 19C DEW_GND
P23_9 20C PINCH_ON
P23_10 21C PINCH_OFF
P23_11 22C S_BRAKE_ON
P23_12 23C S_BRAKE_OFF
P23_13 24C T_BRAKE_ON
P23_14 25C T_BRAKE_OFF
P23_15 26C M_STOPPER_OFF
P23_16 27C M_STOPPER_ON
P21_6 28C FR_SERI0B
P21_8 29C FR_SERI1B
P22_6 30C EJECT_SW_L
31C +16V
32C GND

COMPONENT NAME	MOTHER	02/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM198	

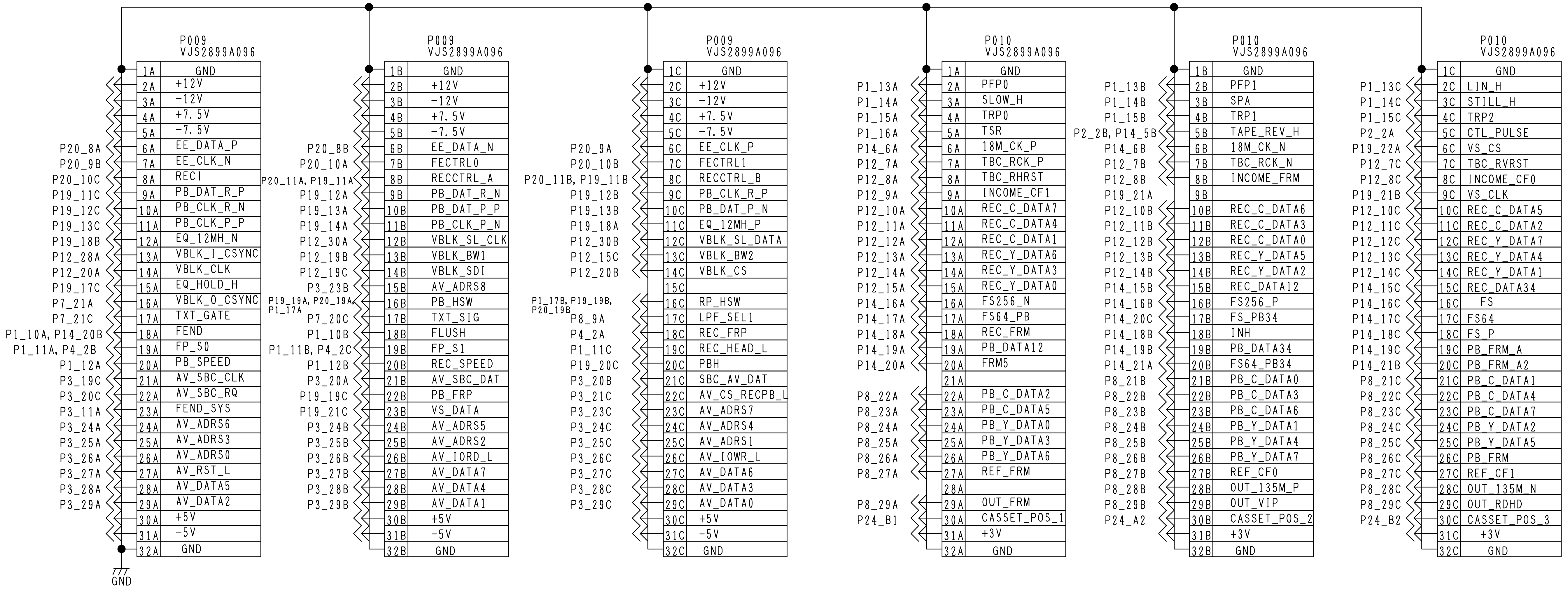

SIF (F3)
P005
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A
7A
8A
9A
P4_14A 10A SP_CLK
11A
12A
P11_13A 13A YC_IN_P0
P11_14A 14A YC_IN_N1
P11_15A 15A YC_IN_P3
P11_16A 16A YC_IN_N4
P11_17A 17A YC_IN_P6
P11_18A 18A YC_IN_N7
P11_19A 19A YC_IN_P9
P11_20A 20A YC_IN_27M_N
21A
22A SIF_FRM
P3_23A 23A AV_ADRS9
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V(F1-4)
31A -5V
32A GND
GND
P005
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B
7B
8B
9B
P3_21A 10B SP_STRB
11B
12B
P11_13B 13B YC_IN_N0
P11_14B 14B YC_IN_P2
P11_15B 15B YC_IN_N3
P11_16B 16B YC_IN_P5
P11_17B 17B YC_IN_N6
P11_18B 18B YC_IN_P8
P11_19B 19B YC_IN_N9
P11_20B 20B SIF_CSYNC
21B
P3_21B 22B AV_CS_VIDEO_L
P3_23B 23B AV_ADRS8
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V(F1-4)
31B -5V
32B GND
P005
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C
7C
8C
9C
P3_15C 10C SP_DATA
11C
12C
P11_13C 13C YC_IN_P1
P11_14C 14C YC_IN_N2
P11_15C 15C YC_IN_P4
P11_16C 16C YC_IN_N5
P11_17C 17C YC_IN_P7
P11_18C 18C YC_IN_N8
P11_19C 19C YC_IN_27M_P
20C
21C EAVSAV
P3_22C 22C AV_ADRS10
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V(F1-4)
31C -5V
32C GND
P006
VJS2899A096
1A GND
P8_2A 2A YC_OUT_P0
P8_3A 3A YC_OUT_N1
P8_4A 4A YC_OUT_P3
P8_5A 5A YC_OUT_N4
P8_6A 6A YC_OUT_P6
P8_7A 7A YC_OUT_N7
P8_8A 8A YC_OUT_P9
P8_9A 9A YC_OUT_27M_N
P14_10A 10A S_REC_AUD12G
P14_11A 11A S_PB_AUD12
P14_12A 12A S_PB_AUD34G
P8_11A 13A TX_H
P8_12A 14A TX_CF
15A
16A
17A
18A
19A
20A
21A
22A
23A
24A
25A
26A
27A
28A
29A
30A
31A +16V
32A GND
P006
VJS2899A096
1B GND
P8_2B 2B YC_OUT_N0
P8_3B 3B YC_OUT_P2
P8_4B 4B YC_OUT_N3
P8_5B 5B YC_OUT_P5
P8_6B 6B YC_OUT_N6
P8_7B 7B YC_OUT_P8
P8_8B 8B YC_OUT_N9
9B
P14_10B 10B S_REC_AUD34
P14_11B 11B S_PB_AUD12G
P14_12B 12B DAUDCK_P
P8_11B 13B TX_V
14B
15B
16B
17B
18B
19B
20B
21B
22B
23B
24B
25B
26B
27B
28B
29B
30B
31B +16V
32B GND
P006
VJS2899A096
1C GND
YC_OUT_P1 2C YC_OUT_P1
P8_3C 3C YC_OUT_N2
P8_4C 4C YC_OUT_P4
P8_5C 5C YC_OUT_N5
P8_6C 6C YC_OUT_P7
P8_7C 7C YC_OUT_N8
P8_8C 8C YC_OUT_27M_P
P14_9C 9C S_REC_AUD12
P14_10C 10C S_REC_AUD34G
P14_11C 11C S_PB_AUD34
P14_12C 12C DAUDCK_N
P8_11C 13C TX_F
P8_12B 14C SIF_CF
15C
16C
17C
18C
19C
20C
21C
22C
23C
24C
25C
26C
27C
28C
29C
30C
31C +16V
32C GND

COMPONENT NAME	MOTHER	03/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM199	


V_OUT(F4)
P007
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P30_B26 6A REF_IN_G
7A
P30_B24 8A VIDEO_OUT1_G
P30_B23 9A VIDEO_OUT2_G
P30_B22 10A VIDEO_OUT3_G
P30_B21 11A Y_OUT_G
P30_B19 12A PR_OUT_G
P30_B20 13A PB_OUT_G
P29_A/B21 14A 4P_Y_OUT_G
P29_A/B19 15A 4P_C_OUT_G
16A
17A
18A
19A
20A
P9_16A 21A VBLK_O_CSYNC
22A
P3_23A 23A AV_ADRS9
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V(F1-4)
31A -5V
32A GND
GND
P007
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B
7B
8B
9B
10B
11B
12B
13B
14B
15B
16B
17B
18B
19B
20B
21B
P3_21B 22B AV_CS_VIDEO_L
P3_23B 23B AV_ADRS8
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V(F1-4)
31B -5V
32B GND
P007
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P30_A26 6C REF_IN
7C
P30_A24 8C VIDEO_OUT1
P30_A23 9C VIDEO_OUT2
P30_A22 10C VIDEO_OUT3
P30_A21 11C Y_OUT
P30_A19 12C PR_OUT
P30_A20 13C PB_OUT
P29_B22 14C 4P_Y_OUT
P29_B20 15C 4P_C_OUT
WIDE_OUT_L 16C WIDE_OUT_L
17C
18C
19C
P9_17B 20C TXT_SIG
P9_17A 21C TXT_GATE
P3_22C 22C AV_ADRS10
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V(F1-4)
31C -5V
32C GND
P008
VJS2899A096
1A GND
P6_2A 2A YC_OUT_P0
P6_3A 3A YC_OUT_N1
P6_4A 4A YC_OUT_P3
P6_5A 5A YC_OUT_N4
P6_6A 6A YC_OUT_P6
P6_7A 7A YC_OUT_N7
P6_8A 8A YC_OUT_P9
P6_9A 9A YC_OUT_27M_N
10A
P6_13A 11A TX_H
P6_14A 12A TX_CF
13A
14A
P4_16C 15A H_SYNC_L
16A
17A
18A
19A
20A
21A
P10_22A 22A PB_C_DATA2
P10_23A 23A PB_C_DATA5
P10_24A 24A PB_Y_DATA0
P10_25A 25A PB_Y_DATA3
P10_26A 26A PB_Y_DATA6
P10_27A 27A REF_FRM
28A
P4_14C 29A OUT_FRM
30A
31A +16V
32A GND
P008
VJS2899A096
1B GND
P6_2B 2B
P6_3B 3B YC_OUT_P2
P6_4B 4B YC_OUT_N3
P6_5B 5B YC_OUT_P5
P6_6B 6B YC_OUT_N6
P6_7B 7B YC_OUT_P8
P6_8B 8B YC_OUT_N9
P9_17C 9B LPF_SEL1
10B INCOME_FRM
P6_13B 11B TX_V
P6_14C 12B SIF_CF
P14_13B 13B REF_FRAME
P4_16A 14B CHAR_DATA_H
P4_17A 15B V_SYNC_L
16B
17B
18B
19B
20B
P10_21B 21B PB_C_DATA0
P10_22B 22B PB_C_DATA3
P10_23B 23B PB_C_DATA6
P10_24B 24B PB_Y_DATA1
P10_25B 25B PB_Y_DATA4
P10_26B 26B PB_Y_DATA7
P10_27B 27B REF_CF0
P10_28B 28B OUT_135M_P
P10_29B 29B OUT_VIP
30B
31B +16V
32B GND
P008
VJS2899A096
1C GND
P6_2C 2C YC_OUT_P1
P6_3C 3C YC_OUT_N2
P6_4C 4C YC_OUT_P4
P6_5C 5C YC_OUT_N5
P6_6C 6C YC_OUT_P7
P6_7C 7C YC_OUT_N8
P6_8C 8C YC_OUT_27M_P
9C
10C
P6_13C 11C TX_F
12C
P14_13C 13C REF_HST_N
P4_16B 14C CHAR_GATE_L
P4_17B 15C COMP_SYNC_L
16C
17C
18C
19C
20C
P10_21C 21C PB_C_DATA1
P10_22C 22C PB_C_DATA4
P10_23C 23C PB_C_DATA7
P10_24C 24C PB_Y_DATA2
P10_25C 25C PB_Y_DATA5
P10_26C 26C PB_FRM
P10_27C 27C REF_CF1
P10_28C 28C OUT_135M_N
P10_29C 29C OUT_RDHD
30C
31C +16V
32C GND

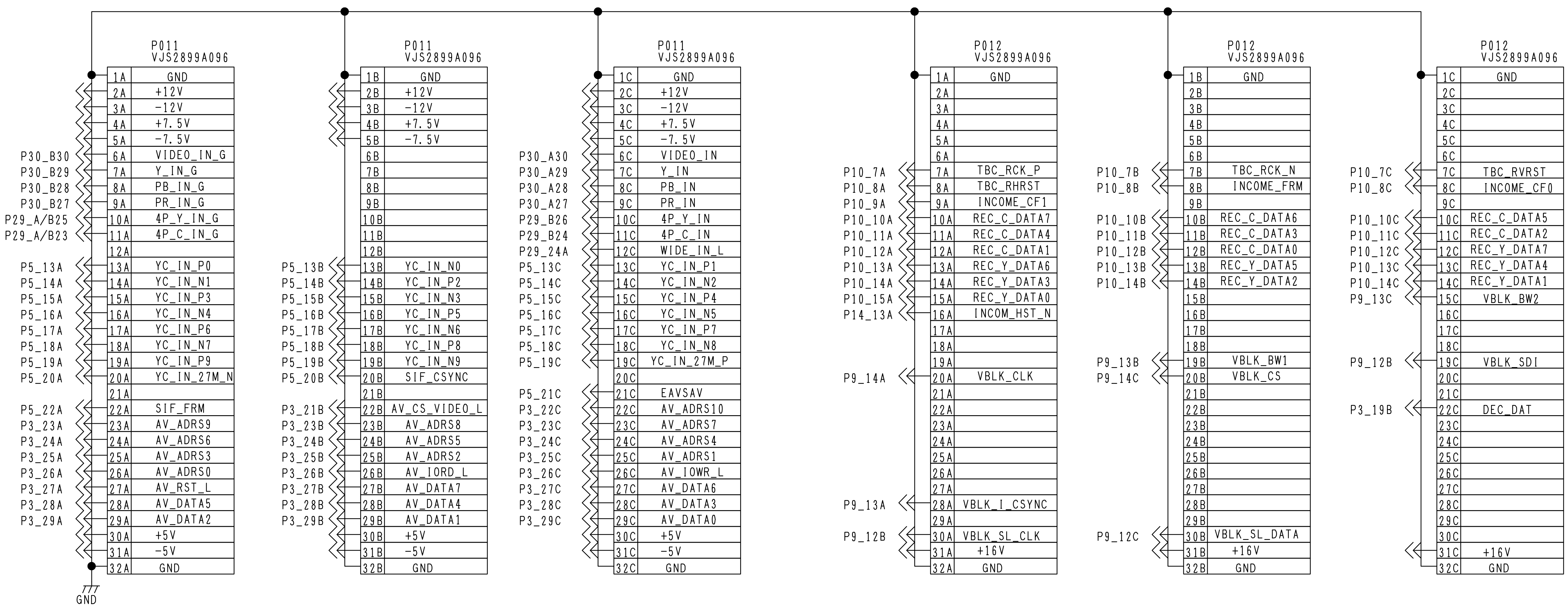
COMPONENT NAME	MOTHER	04/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM200	

REC/PB (F5)


P009
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P20_8A 6A EE_DATA_P
P20_9B 7A EE_CLK_N
P20_10C 8A RECI
P19_11C 9A PB_DAT_R_P
P19_12C 10A PB_CLK_R_N
P19_13C 11A PB_CLK_P_P
P19_18B 12A EQ_12MH_N
P12_28A 13A VBLK_I_CSYNC
P12_20A 14A VBLK_CLK
P19_17C 15A EQ_HOLD_H
P7_21A 16A VBLK_O_CSYNC
P7_21C 17A TXT_GATE
P1_10A, P14_20B 18A FEND
P1_11A, P4_2B 19A FP_S0
P1_12A 20A PB_SPEED
P3_19C 21A AV_SBC_CLK
P3_20C 22A AV_SBC_RQ
P3_11A 23A FEND_SYS
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V
31A -5V
32A GND
GND
P009
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
P20_8B 6B EE_DATA_N
P20_10A 7B FECTRL0
P20_11A, P19_11A 8B RECCTRL_A
P19_12A 9B PB_DAT_R_N
P19_13A 10B PB_DAT_P_P
P19_14A 11B PB_CLK_P_N
P12_30A 12B VBLK_SL_CLK
P12_19B 13B VBLK_BW1
P12_19C 14B VBLK_SDI
P3_23B 15B AV_ADRS8
P19_19A, P20_19A, P1_17A 16B PB_HSW
P7_20C 17B TXT_SIG
P1_10B 18B FLUSH
P1_11B, P4_2C 19B FP_S1
P1_12B 20B REC_SPEED
P3_20A 21B AV_SBC_DAT
P19_19C 22B PB_FRP
P19_21C 23B VS_DATA
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V
31B -5V
32B GND
P009
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P20_9A 6C EE_CLK_P
P20_10B 7C FECTRL1
P20_11B, P19_11B 8C RECCTRL_B
P19_12B 9C PB_CLK_R_P
P19_13B 10C PB_DAT_P_N
P19_18A 11C EQ_12MH_P
P12_30B 12C VBLK_SL_DATA
P12_15C 13C VBLK_BW2
P12_20B 14C VBLK_CS
15C
P1_17B, P19_19B, P20_19B 16C RP_HSW
P8_9A 17C LPF_SEL1
P4_2A 18C REC_FRP
P1_11C 19C REC_HEAD_L
P19_20C 20C PBH
P3_20B 21C SBC_AV_DAT
P3_21C 22C AV_CS_RECPB_L
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V
31C -5V
32C GND
P010
VJS2899A096
1A GND
P1_13A 2A PFP0
P1_14A 3A SLOW_H
P1_15A 4A TRP0
P1_16A 5A TSR
P14_6A 6A 18M_CK_P
P12_7A 7A TBC_RCK_P
P12_8A 8A TBC_RHRST
P12_9A 9A INCOME_CF1
P12_10A 10A REC_C_DATA7
P12_11A 11A REC_C_DATA4
P12_12A 12A REC_C_DATA1
P12_13A 13A REC_Y_DATA6
P12_14A 14A REC_Y_DATA3
P12_15A 15A REC_Y_DATA0
P14_16A 16A FS256_N
P14_17A 17A FS64_PB
P14_18A 18A REC_FRM
P14_19A 19A PB_DATA12
P14_20A 20A FRM5
21A
P8_22A 22A PB_C_DATA2
P8_23A 23A PB_C_DATA5
P8_24A 24A PB_Y_DATA0
P8_25A 25A PB_Y_DATA3
P8_26A 26A PB_Y_DATA6
P8_27A 27A REF_FRM
28A
P8_29A 29A OUT_FRM
P24_B1 30A CASSET_POS_1
31A +3V
32A GND
P010
VJS2899A096
1B GND
P1_13B 2B PFP1
P1_14B 3B SPA
P1_15B 4B TRP1
P2_2B, P14_5B 5B TAPE_REV_H
P14_6B 6B 18M_CK_N
P12_7B 7B TBC_RCK_N
P12_8B 8B INCOME_FRM
P19_21A 9B
P12_10B 10B REC_C_DATA6
P12_11B 11B REC_C_DATA3
P12_12B 12B REC_C_DATA0
P12_13B 13B REC_Y_DATA5
P12_14B 14B REC_Y_DATA2
P14_15B 15B REC_DATA12
P14_16B 16B FS256_P
P14_20C 17B FS_PB34
P14_18B 18B INH
P14_19B 19B PB_DATA34
P14_21A 20B FS64_PB34
P8_21B 21B PB_C_DATA0
P8_22B 22B PB_C_DATA3
P8_23B 23B PB_C_DATA6
P8_24B 24B PB_Y_DATA1
P8_25B 25B PB_Y_DATA4
P8_26B 26B PB_Y_DATA7
P8_27B 27B REF_CF0
P8_28B 28B OUT_135M_P
P8_29B 29B OUT_VIP
P24_A2 30B CASSET_POS_2
31B +3V
32B GND
P010
VJS2899A096
1C GND
P1_13C 2C LIN_H
P1_14C 3C STILL_H
P1_15C 4C TRP2
P2_2A 5C CTL_PULSE
P19_22A 6C VS_CS
P12_7C 7C TBC_RVRST
P12_8C 8C INCOME_CF0
P19_21B 9C VS_CLK
P12_10C 10C REC_C_DATA5
P12_11C 11C REC_C_DATA2
P12_12C 12C REC_Y_DATA7
P12_13C 13C REC_Y_DATA4
P12_14C 14C REC_Y_DATA1
P14_15C 15C REC_DATA34
P14_16C 16C FS
P14_17C 17C FS64
P14_18C 18C FS_P
P14_19C 19C PB_FRM_A
P14_21B 20C PB_FRM_A2
P8_21C 21C PB_C_DATA1
P8_22C 22C PB_C_DATA4
P8_23C 23C PB_C_DATA7
P8_24C 24C PB_Y_DATA2
P8_25C 25C PB_Y_DATA5
P8_26C 26C PB_FRM
P8_27C 27C REF_CF1
P8_28C 28C OUT_135M_N
P8_29C 29C OUT_RDHD
P24_B2 30C CASSET_POS_3
31C +3V
32C GND

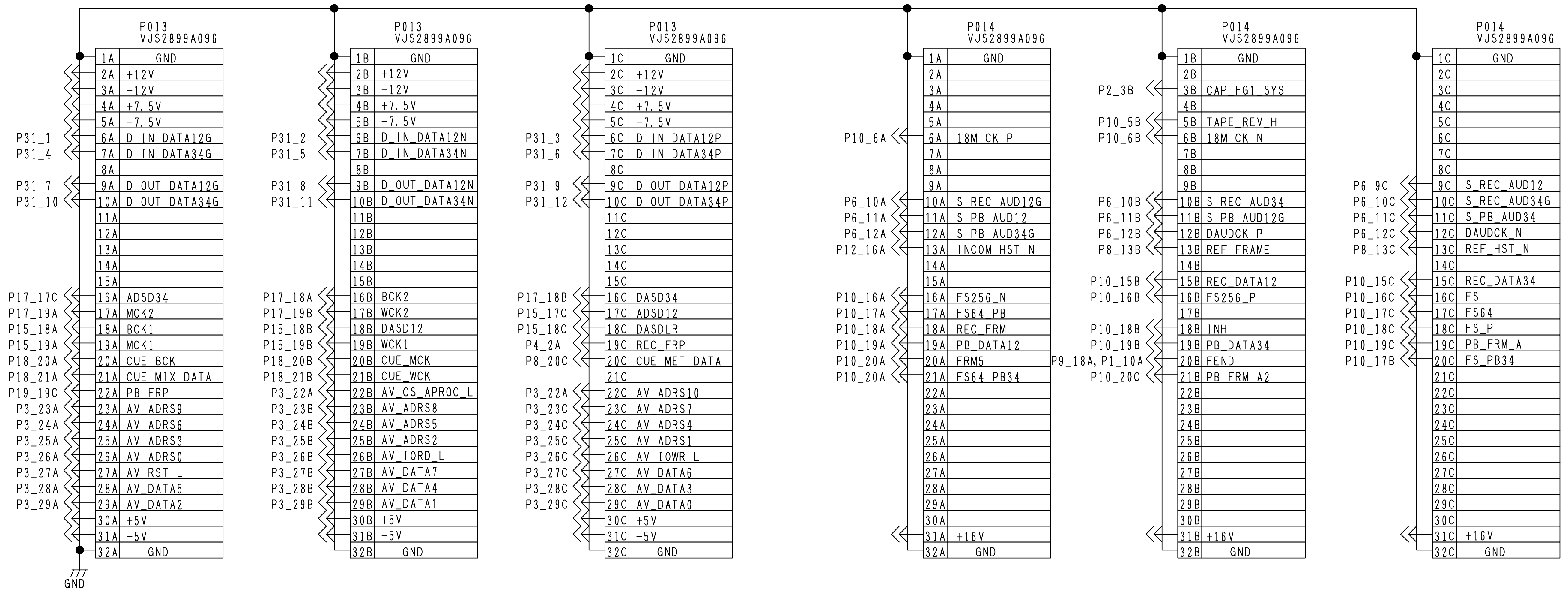
COMPONENT NAME	MOTHER	05/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM201	

VIN (F6)

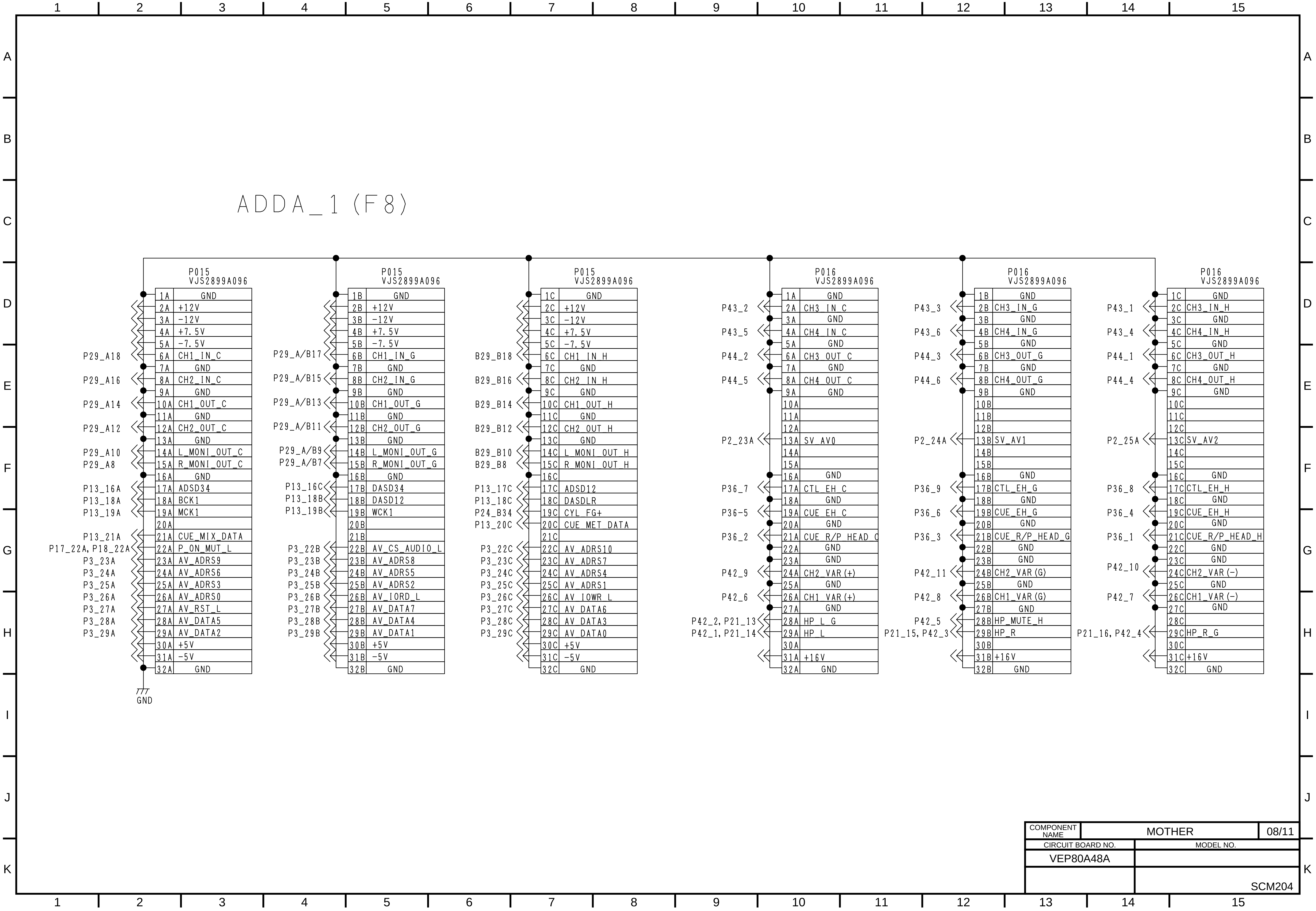

P011
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P30_B30 6A VIDEO_IN_G
P30_B29 7A Y_IN_G
P30_B28 8A PB_IN_G
P30_B27 9A PR_IN_G
P29_A/B25 10A 4P_Y_IN_G
P29_A/B23 11A 4P_C_IN_G
12A
P5_13A 13A YC_IN_P0
P5_14A 14A YC_IN_N1
P5_15A 15A YC_IN_P3
P5_16A 16A YC_IN_N4
P5_17A 17A YC_IN_P6
P5_18A 18A YC_IN_N7
P5_19A 19A YC_IN_P9
P5_20A 20A YC_IN_27M_N
21A
P5_22A 22A SIF_FRM
P3_23A 23A AV_ADRS9
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V
31A -5V
32A GND
GND
P011
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B
7B
8B
9B
10B
11B
12B
P5_13B 13B YC_IN_N0
P5_14B 14B YC_IN_P2
P5_15B 15B YC_IN_N3
P5_16B 16B YC_IN_P5
P5_17B 17B YC_IN_N6
P5_18B 18B YC_IN_P8
P5_19B 19B YC_IN_N9
P5_20B 20B SIF_CSYNC
21B
P3_21B 22B AV_CS_VIDEO_L
P3_23B 23B AV_ADRS8
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V
31B -5V
32B GND
P011
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P30_A30 6C VIDEO_IN
P30_A29 7C Y_IN
P30_A28 8C PB_IN
P30_A27 9C PR_IN
P29_B26 10C 4P_Y_IN
P29_B24 11C 4P_C_IN
P29_24A 12C WIDE_IN_L
P5_13C 13C YC_IN_P1
P5_14C 14C YC_IN_N2
P5_15C 15C YC_IN_P4
P5_16C 16C YC_IN_N5
P5_17C 17C YC_IN_P7
P5_18C 18C YC_IN_N8
P5_19C 19C YC_IN_27M_P
20C
P5_21C 21C EAVSAV
P3_22C 22C AV_ADRS10
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V
31C -5V
32C GND
P012
VJS2899A096
1A GND
2A
3A
4A
5A
6A
P10_7A 7A TBC_RCK_P
P10_8A 8A TBC_RHRST
P10_9A 9A INCOME_CF1
P10_10A 10A REC_C_DATA7
P10_11A 11A REC_C_DATA4
P10_12A 12A REC_C_DATA1
P10_13A 13A REC_Y_DATA6
P10_14A 14A REC_Y_DATA3
P10_15A 15A REC_Y_DATA0
P14_13A 16A INCOM_HST_N
17A
18A
19A
P9_14A 20A VBLK_CLK
21A
22A
23A
24A
25A
26A
27A
P9_13A 28A VBLK_I_CSYNC
29A
P9_12B 30A VBLK_SL_CLK
31A +16V
32A GND
P012
VJS2899A096
1B GND
2B
3B
4B
5B
6B
P10_7B 7B TBC_RCK_N
P10_8B 8B INCOME_FRM
9B
P10_10B 10B REC_C_DATA6
P10_11B 11B REC_C_DATA3
P10_12B 12B REC_C_DATA0
P10_13B 13B REC_Y_DATA5
P10_14B 14B REC_Y_DATA2
15B
16B
17B
18B
P9_13B 19B VBLK_BW1
P9_14C 20B VBLK_CS
21B
22B
23B
24B
25B
26B
27B
28B
29B
P9_12C 30B VBLK_SL_DATA
31B +16V
32B GND
P012
VJS2899A096
1C GND
2C
3C
4C
5C
6C
P10_7C 7C TBC_RVRST
P10_8C 8C INCOME_CF0
9C
P10_10C 10C REC_C_DATA5
P10_11C 11C REC_C_DATA2
P10_12C 12C REC_Y_DATA7
P10_13C 13C REC_Y_DATA4
P10_14C 14C REC_Y_DATA1
P9_13C 15C VBLK_BW2
16C
17C
18C
P9_12B 19C VBLK_SDI
20C
21C
P3_19B 22C DEC_DAT
23C
24C
25C
26C
27C
28C
29C
30C
31C +16V
32C GND

COMPONENT NAME	MOTHER	06/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM202	

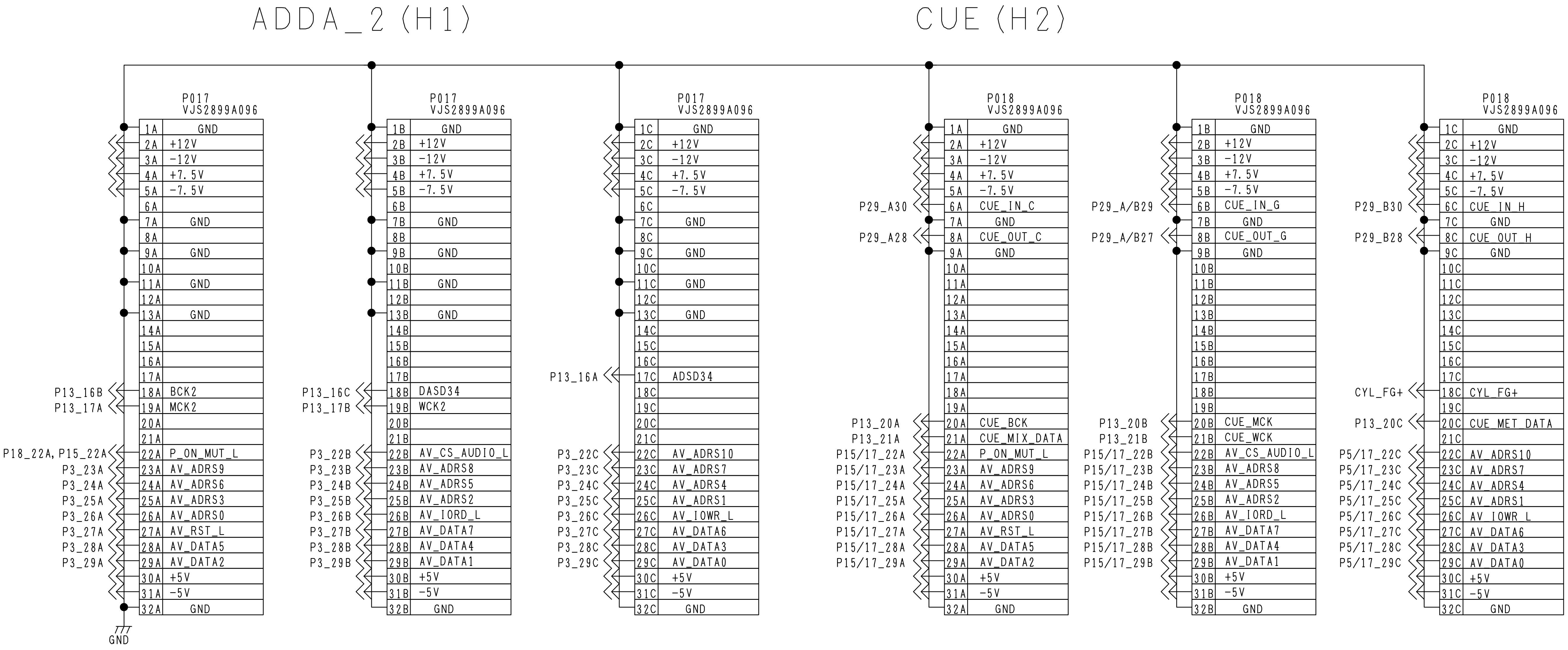
A_PROC (F7)


P013
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P31_1 6A D_IN_DATA12G
P31_4 7A D_IN_DATA34G
8A
P31_7 9A D_OUT_DATA12G
P31_10 10A D_OUT_DATA34G
11A
12A
13A
14A
15A
P17_17C 16A ADSD34
P17_19A 17A MCK2
P15_18A 18A BCK1
P15_19A 19A MCK1
P18_20A 20A CUE_BCK
P18_21A 21A CUE_MIX_DATA
P19_19C 22A PB_FRP
P3_23A 23A AV_ADRS9
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V
31A -5V
32A GND
GND
P013
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
P31_2 6B D_IN_DATA12N
P31_5 7B D_IN_DATA34N
8B
P31_8 9B D_OUT_DATA12N
P31_11 10B D_OUT_DATA34N
11B
12B
13B
14B
15B
P17_18A 16B BCK2
P17_19B 17B WCK2
P15_18B 18B DASD12
P15_19B 19B WCK1
P18_20B 20B CUE_MCK
P18_21B 21B CUE_WCK
P3_22A 22B AV_CS_APROC_L
P3_23B 23B AV_ADRS8
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V
31B -5V
32B GND
P013
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P31_3 6C D_IN_DATA12P
P31_6 7C D_IN_DATA34P
8C
P31_9 9C D_OUT_DATA12P
P31_12 10C D_OUT_DATA34P
11C
12C
13C
14C
15C
P17_18B 16C DASD34
P15_17C 17C ADSD12
P15_18C 18C DASDLR
P4_2A 19C REC_FRP
P8_20C 20C CUE_MET_DATA
21C
P3_22A 22C AV_ADRS10
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V
31C -5V
32C GND
P014
VJS2899A096
1A GND
2A
3A
4A
5A
P10_6A 6A 18M_CK_P
7A
8A
9A
P6_10A 10A S_REC_AUD12G
P6_11A 11A S_PB_AUD12
P6_12A 12A S_PB_AUD34G
P12_16A 13A INCOM_HST_N
14A
15A
P10_16A 16A FS256_N
P10_17A 17A FS64_PB
P10_18A 18A REC_FRM
P10_19A 19A PB_DATA12
P10_20A 20A FRM5
P10_20A 21A FS64_PB34
22A
23A
24A
25A
26A
27A
28A
29A
30A
31A +16V
32A GND
P014
VJS2899A096
1B GND
2B
P2_3B 3B CAP_FG1_SYS
4B
P10_5B 5B TAPE_REV_H
P10_6B 6B 18M_CK_N
7B
8B
9B
P6_10B 10B S_REC_AUD34
P6_11B 11B S_PB_AUD12G
P6_12B 12B DAUDCK_P
P8_13B 13B REF_FRAME
14B
P10_15B 15B REC_DATA12
P10_16B 16B FS256_P
17B
P10_18B 18B INH
P10_19B 19B PB_DATA34
P9_18A, P1_10A 20B FEND
P10_20C 21B PB_FRM_A2
22B
23B
24B
25B
26B
27B
28B
29B
30B
31B +16V
32B GND
P014
VJS2899A096
1C GND
2C
3C
4C
5C
6C
7C
8C
P6_9C 9C S_REC_AUD12
P6_10C 10C S_REC_AUD34G
P6_11C 11C S_PB_AUD34
P6_12C 12C DAUDCK_N
P8_13C 13C REF_HST_N
14C
P10_15C 15C REC_DATA34
P10_16C 16C FS
P10_17C 17C FS64
P10_18C 18C FS_P
P10_19C 19C PB_FRM_A
P10_17B 20C FS_PB34
21C
22C
23C
24C
25C
26C
27C
28C
29C
30C
31C +16V
32C GND

COMPONENT NAME	MOTHER		07/11
CIRCUIT BOARD NO.		MODEL NO.	
VEP80A48A			
		SCM203	

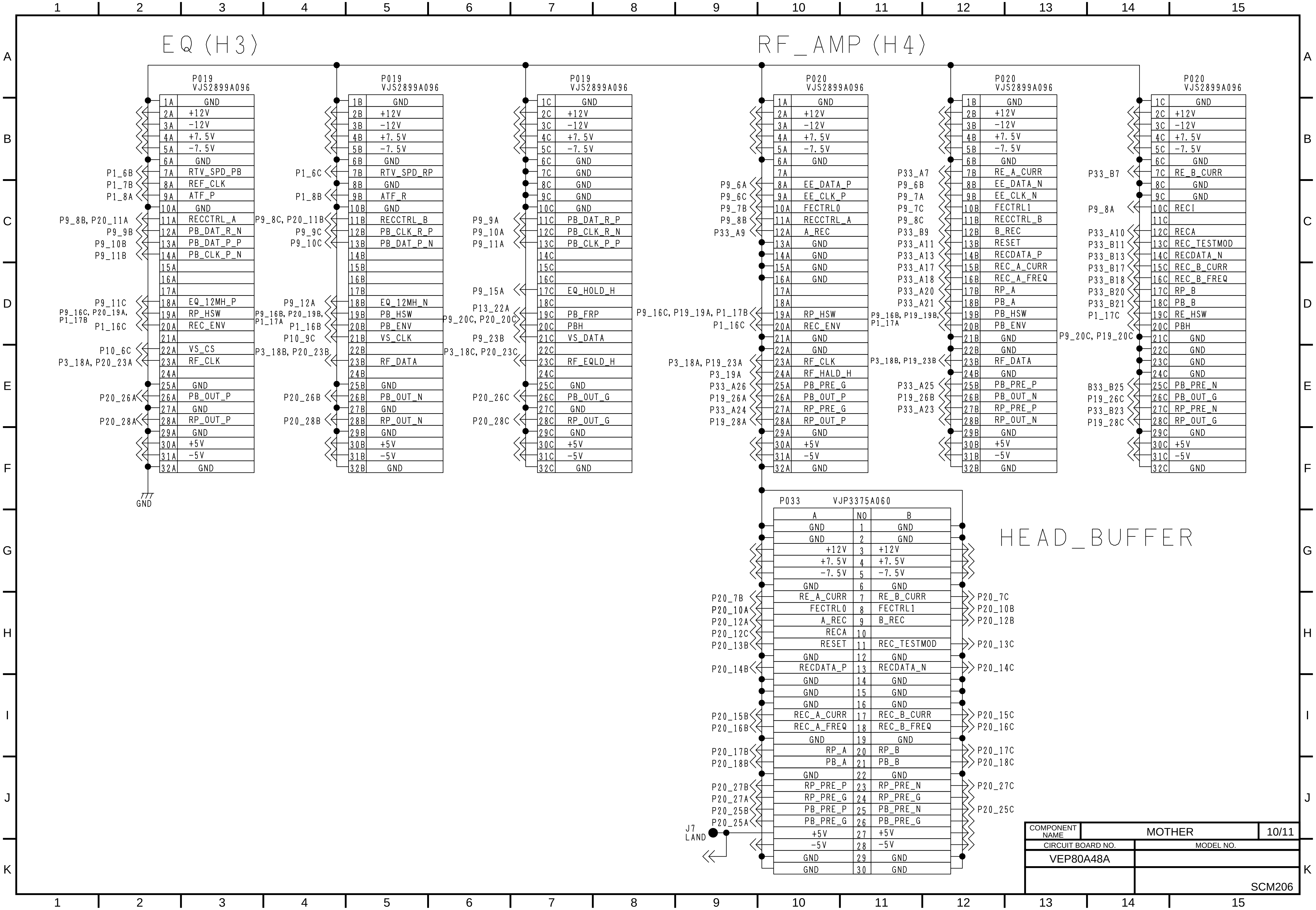

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
ADDA_1(F8)
P015
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P29_A18 6A CH1_IN_C
7A GND
P29_A16 8A CH2_IN_C
9A GND
P29_A14 10A CH1_OUT_C
11A GND
P29_A12 12A CH2_OUT_C
13A GND
P29_A10 14A L_MONI_OUT_C
P29_A8 15A R_MONI_OUT_C
16A GND
P13_16A 17A ADSD34
P13_18A 18A BCK1
P13_19A 19A MCK1
20A
P13_21A 21A CUE_MIX_DATA
P17_22A, P18_22A 22A P_ON_MUT_L
P3_23A 23A AV_ADRS9
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V
31A -5V
32A GND
GND
P015
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
P29_A/B17 6B CH1_IN_G
7B GND
P29_A/B15 8B CH2_IN_G
9B GND
P29_A/B13 10B CH1_OUT_G
11B GND
P29_A/B11 12B CH2_OUT_G
13B GND
P29_A/B9 14B L_MONI_OUT_G
P29_A/B7 15B R_MONI_OUT_G
16B GND
P13_16C 17B DASD34
P13_18B 18B DASD12
P13_19B 19B WCK1
20B
21B
P3_22B 22B AV_CS_AUDIO_L
P3_23B 23B AV_ADRS8
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V
31B -5V
32B GND
P015
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
B29_B18 6C CH1_IN_H
7C GND
B29_B16 8C CH2_IN_H
9C GND
B29_B14 10C CH1_OUT_H
11C GND
B29_B12 12C CH2_OUT_H
13C GND
B29_B10 14C L_MONI_OUT_H
B29_B8 15C R_MONI_OUT_H
16C
P13_17C 17C ADSD12
P13_18C 18C DASDLR
P24_B34 19C CYL_FG+
P13_20C 20C CUE_MET_DATA
21C
P3_22C 22C AV_ADRS10
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V
31C -5V
32C GND
P016
VJS2899A096
1A GND
P43_2 2A CH3_IN_C
3A GND
P43_5 4A CH4_IN_C
5A GND
P44_2 6A CH3_OUT_C
7A GND
P44_5 8A CH4_OUT_C
9A GND
10A
11A
12A
P2_23A 13A SV_AV0
14A
15A
16A GND
P36_7 17A CTL_EH_C
18A GND
P36-5 19A CUE_EH_C
20A GND
P36_2 21A CUE_R/P_HEAD_C
22A GND
23A GND
P42_9 24A CH2_VAR(+)
25A GND
P42_6 26A CH1_VAR(+)
27A GND
P42_2, P21_13 28A HP_L_G
P42_1, P21_14 29A HP_L
30A
31A +16V
32A GND
P016
VJS2899A096
1B GND
P43_3 2B CH3_IN_G
3B GND
P43_6 4B CH4_IN_G
5B GND
P44_3 6B CH3_OUT_G
7B GND
P44_6 8B CH4_OUT_G
9B GND
10B
11B
12B
P2_24A 13B SV_AV1
14B
15B
16B GND
P36_9 17B CTL_EH_G
18B GND
P36_6 19B CUE_EH_G
20B GND
P36_3 21B CUE_R/P_HEAD_G
22B GND
23B GND
P42_11 24B CH2_VAR(G)
25B GND
P42_8 26B CH1_VAR(G)
27B GND
P42_5 28B HP_MUTE_H
P21_15, P42_3 29B HP_R
30B
31B +16V
32B GND
P016
VJS2899A096
1C GND
P43_1 2C CH3_IN_H
3C GND
P43_4 4C CH4_IN_H
5C GND
P44_1 6C CH3_OUT_H
7C GND
P44_4 8C CH4_OUT_H
9C GND
10C
11C
12C
P2_25A 13C SV_AV2
14C
15C
16C GND
P36_8 17C CTL_EH_H
18C GND
P36_4 19C CUE_EH_H
20C GND
P36_1 21C CUE_R/P_HEAD_H
22C GND
23C GND
P42_10 24C CH2_VAR(-)
25C GND
P42_7 26C CH1_VAR(-)
27C GND
28C
P21_16, P42_4 29C HP_R_G
30C
31C +16V
32C GND

COMPONENT NAME	MOTHER	08/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM204	



ADDA_2 (H1)
CUE (H2)
P017
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A
7A GND
8A
9A GND
10A
11A GND
12A
13A GND
14A
15A
16A
17A
P13_16B 18A BCK2
P13_17A 19A MCK2
20A
21A
P18_22A, P15_22A 22A P_ON_MUT_L
P3_23A 23A AV_ADRS9
P3_24A 24A AV_ADRS6
P3_25A 25A AV_ADRS3
P3_26A 26A AV_ADRS0
P3_27A 27A AV_RST_L
P3_28A 28A AV_DATA5
P3_29A 29A AV_DATA2
30A +5V
31A -5V
32A GND
GND
P017
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B
7B GND
8B
9B GND
10B
11B GND
12B
13B GND
14B
15B
16B
17B
P13_16C 18B DASD34
P13_17B 19B WCK2
20B
21B
P3_22B 22B AV_CS_AUDIO_L
P3_23B 23B AV_ADRS8
P3_24B 24B AV_ADRS5
P3_25B 25B AV_ADRS2
P3_26B 26B AV_IORD_L
P3_27B 27B AV_DATA7
P3_28B 28B AV_DATA4
P3_29B 29B AV_DATA1
30B +5V
31B -5V
32B GND
P017
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C
7C GND
8C
9C GND
10C
11C GND
12C
13C GND
14C
15C
16C
P13_16A 17C ADSD34
18C
19C
20C
21C
P3_22C 22C AV_ADRS10
P3_23C 23C AV_ADRS7
P3_24C 24C AV_ADRS4
P3_25C 25C AV_ADRS1
P3_26C 26C AV_IOWR_L
P3_27C 27C AV_DATA6
P3_28C 28C AV_DATA3
P3_29C 29C AV_DATA0
30C +5V
31C -5V
32C GND
P018
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
P29_A30 6A CUE_IN_C
7A GND
P29_A28 8A CUE_OUT_C
9A GND
10A
11A
12A
13A
14A
15A
16A
17A
18A
19A
P13_20A 20A CUE_BCK
P13_21A 21A CUE_MIX_DATA
P15/17_22A 22A P_ON_MUT_L
P15/17_23A 23A AV_ADRS9
P15/17_24A 24A AV_ADRS6
P15/17_25A 25A AV_ADRS3
P15/17_26A 26A AV_ADRS0
P15/17_27A 27A AV_RST_L
P15/17_28A 28A AV_DATA5
P15/17_29A 29A AV_DATA2
30A +5V
31A -5V
32A GND
P018
VJS2899A096
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
P29_A/B29 6B CUE_IN_G
7B GND
P29_A/B27 8B CUE_OUT_G
9B GND
10B
11B
12B
13B
14B
15B
16B
17B
18B
19B
P13_20B 20B CUE_MCK
P13_21B 21B CUE_WCK
P15/17_22B 22B AV_CS_AUDIO_L
P15/17_23B 23B AV_ADRS8
P15/17_24B 24B AV_ADRS5
P15/17_25B 25B AV_ADRS2
P15/17_26B 26B AV_IORD_L
P15/17_27B 27B AV_DATA7
P15/17_28B 28B AV_DATA4
P15/17_29B 29B AV_DATA1
30B +5V
31B -5V
32B GND
P018
VJS2899A096
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
P29_B30 6C CUE_IN_H
7C GND
P29_B28 8C CUE_OUT_H
9C GND
10C
11C
12C
13C
14C
15C
16C
17C
CYL_FG+ 18C CYL_FG+
19C
P13_20C 20C CUE_MET_DATA
21C
P5/17_22C 22C AV_ADRS10
P5/17_23C 23C AV_ADRS7
P5/17_24C 24C AV_ADRS4
P5/17_25C 25C AV_ADRS1
P5/17_26C 26C AV_IOWR_L
P5/17_27C 27C AV_DATA6
P5/17_28C 28C AV_DATA3
P5/17_29C 29C AV_DATA0
30C +5V
31C -5V
32C GND

COMPONENT NAME	MOTHER		09/11
CIRCUIT BOARD NO.		MODEL NO.	
VEP80A48A			
		SCM205	


EQ (H3)
RF_AMP (H4)
HEAD_BUFFER
P019
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A GND
7A RTV_SPD_PB
8A REF_CLK
9A ATF_P
10A GND
11A RECCTRL_A
12A PB_DAT_R_N
13A PB_DAT_P_P
14A PB_CLK_P_N
18A EQ_12MH_P
19A RP_HSW
20A REC_ENV
22A VS_CS
23A RF_CLK
25A GND
26A PB_OUT_P
27A GND
28A RP_OUT_P
29A GND
30A +5V
31A -5V
32A GND
P1_6B
P1_7B
P1_8A
P9_8B, P20_11A
P9_9B
P9_10B
P9_11B
P9_11C
P9_16C, P20_19A, P1_17B
P1_16C
P10_6C
P3_18A, P20_23A
P20_26A
P20_28A
GND
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B GND
7B RTV_SPD_RP
8B GND
9B ATF_R
10B GND
11B RECCTRL_B
12B PB_CLK_R_P
13B PB_DAT_P_N
18B EQ_12MH_N
19B PB_HSW
20B PB_ENV
21B VS_CLK
23B RF_DATA
25B GND
26B PB_OUT_N
27B GND
28B RP_OUT_N
29B GND
30B +5V
31B -5V
32B GND
P1_6C
P1_8B
P9_8C, P20_11B
P9_9C
P9_10C
P9_12A
P9_16B, P20_19B, P1_17A
P1_16B
P10_9C
P3_18B, P20_23B
P20_26B
P20_28B
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C GND
7C GND
8C GND
9C GND
10C GND
11C PB_DAT_R_P
12C PB_CLK_R_N
13C PB_CLK_P_P
17C EQ_HOLD_H
19C PB_FRP
20C PBH
21C VS_DATA
23C RF_EQLD_H
25C GND
26C PB_OUT_G
27C GND
28C RP_OUT_G
29C GND
30C +5V
31C -5V
32C GND
P9_9A
P9_10A
P9_11A
P9_15A
P13_22A
P9_20C, P20_20C
P9_23B
P3_18C, P20_23C
P20_26C
P20_28C
P020
VJS2899A096
1A GND
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A GND
8A EE_DATA_P
9A EE_CLK_P
10A FECTRL0
11A RECCTRL_A
12A A_REC
13A GND
14A GND
15A GND
16A GND
19A RP_HSW
20A REC_ENV
21A GND
22A GND
23A RF_CLK
24A RF_HALD_H
25A PB_PRE_G
26A PB_OUT_P
27A RP_PRE_G
28A RP_OUT_P
29A GND
30A +5V
31A -5V
32A GND
P9_6A
P9_6C
P9_7B
P9_8B
P33_A9
P9_16C, P19_19A, P1_17B
P1_16C
P3_18A, P19_23A
P3_19A
P33_A26
P19_26A
P33_A24
P19_28A
1B GND
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B GND
7B RE_A_CURR
8B EE_DATA_N
9B EE_CLK_N
10B FECTRL1
11B RECCTRL_B
12B B_REC
13B RESET
14B RECDATA_P
15B REC_A_CURR
16B REC_A_FREQ
17B RP_A
18B PB_A
19B PB_HSW
20B PB_ENV
21B GND
22B GND
23B RF_DATA
24B GND
25B PB_PRE_P
26B PB_OUT_N
27B RP_PRE_P
28B RP_OUT_N
29B GND
30B +5V
31B -5V
32B GND
P33_A7
P9_6B
P9_7A
P9_7C
P9_8C
P33_B9
P33_A11
P33_A13
P33_A17
P33_A18
P33_A20
P33_A21
P9_16B, P19_19B, P1_17A
P3_18B, P19_23B
P33_A25
P19_26B
P33_A23
1C GND
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C GND
7C RE_B_CURR
8C GND
9C GND
10C RECI
12C RECA
13C REC_TESTMOD
14C RECDATA_N
15C REC_B_CURR
16C REC_B_FREQ
17C RP_B
18C PB_B
19C RE_HSW
20C PBH
21C GND
22C GND
23C GND
24C GND
25C PB_PRE_N
26C PB_OUT_G
27C RP_PRE_N
28C RP_OUT_G
29C GND
30C +5V
31C -5V
32C GND
P33_B7
P9_8A
P33_A10
P33_B11
P33_B13
P33_B17
P33_B18
P33_B20
P33_B21
P1_17C
P9_20C, P19_20C
B33_B25
P19_26C
P33_B23
P19_28C
P033 VJP3375A060
A
NO
B
GND 1 GND
GND 2 GND
+12V 3 +12V
+7.5V 4 +7.5V
-7.5V 5 -7.5V
GND 6 GND
RE_A_CURR 7 RE_B_CURR
FECTRL0 8 FECTRL1
A_REC 9 B_REC
RECA 10
RESET 11 REC_TESTMOD
GND 12 GND
RECDATA_P 13 RECDATA_N
GND 14 GND
GND 15 GND
GND 16 GND
REC_A_CURR 17 REC_B_CURR
REC_A_FREQ 18 REC_B_FREQ
GND 19 GND
RP_A 20 RP_B
PB_A 21 PB_B
GND 22 GND
RP_PRE_P 23 RP_PRE_N
RP_PRE_G 24 RP_PRE_G
PB_PRE_P 25 PB_PRE_N
PB_PRE_G 26 PB_PRE_G
+5V 27 +5V
-5V 28 -5V
GND 29 GND
GND 30 GND
P20_7B
P20_10A
P20_12A
P20_12C
P20_13B
P20_14B
P20_15B
P20_16B
P20_17B
P20_18B
P20_27B
P20_27A
P20_25B
P20_25A
P20_7C
P20_10B
P20_12B
P20_13C
P20_14C
P20_15C
P20_16C
P20_17C
P20_18C
P20_27C
P20_25C
J7
LAND
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
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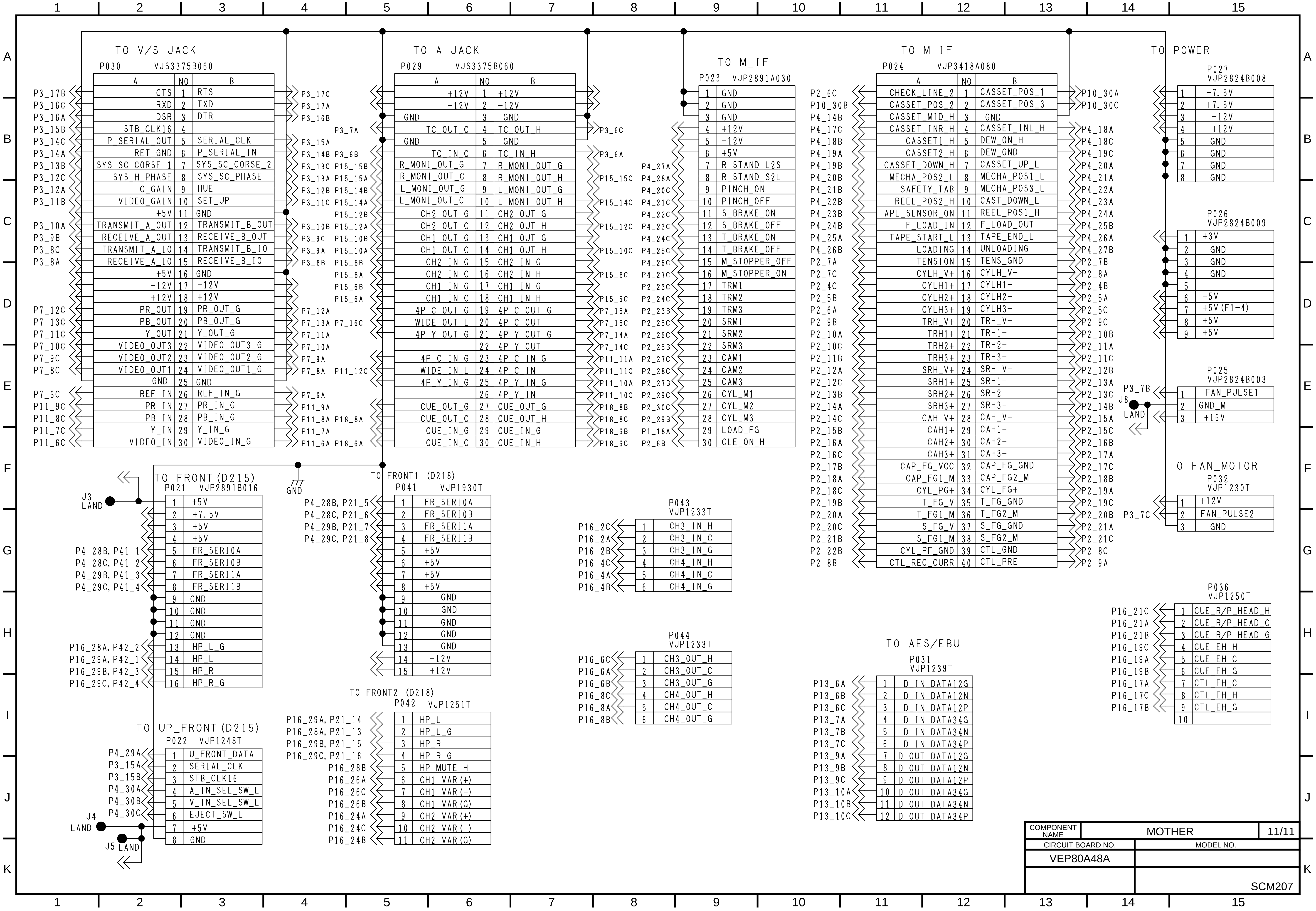
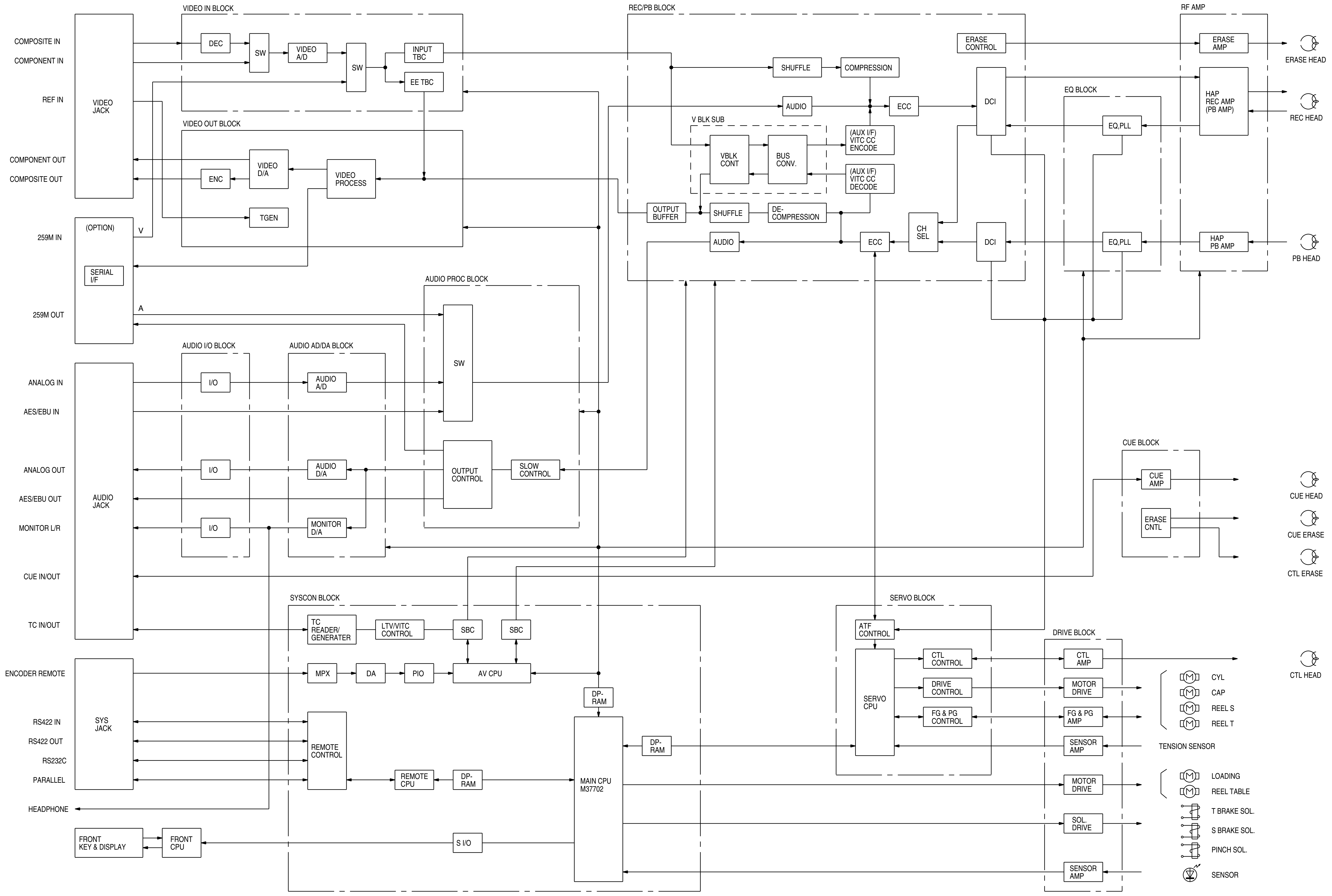
COMPONENT NAME	MOTHER	10/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		
	SCM206	


TO V/S_JACK
P030 VJS3375B060
TO A_JACK
P029 VJS3375B060
TO M_IF
P023 VJP2891A030
TO M_IF
P024 VJP3418A080
TO POWER
P027 VJP2824B008
P026 VJP2824B009
P025 VJP2824B003
J8 LAND
TO FAN_MOTOR
P032 VJP1230T
TO FRONT (D215)
P021 VJP2891B016
J3 LAND
GND
TO FRONT1 (D218)
P041 VJP1930T
P043 VJP1233T
P044 VJP1233T
TO AES/EBU
P031 VJP1239T
P036 VJP1250T
TO UP_FRONT (D215)
P022 VJP1248T
J4 LAND
J5 LAND
TO FRONT2 (D218)
P042 VJP1251T

COMPONENT NAME	MOTHER	11/11
CIRCUIT BOARD NO.	MODEL NO.	
VEP80A48A		

SCM207

OVERALL BLOCK DIAGRAM



VIDEO IN BLOCK
REC/PB BLOCK
RF AMP
COMPOSITE IN
COMPONENT IN
REF IN
VIDEO JACK
COMPONENT OUT
COMPOSITE OUT
DEC
SW
VIDEO A/D
SW
INPUT TBC
EE TBC
VIDEO OUT BLOCK
VIDEO D/A
ENC
VIDEO PROCESS
TGEN
259M IN
(OPTION)
V
SERIAL I/F
A
259M OUT
SHUFFLE
COMPRESSION
AUDIO
ECC
V BLK SUB
VBLK CONT
BUS CONV.
(AUX I/F) VITC CC ENCODE
(AUX I/F) VITC CC DECODE
OUTPUT BUFFER
SHUFFLE
DE-COMPRESSION
AUDIO
ECC
CH SEL
ERASE CONTROL
DCI
DCI
EQ BLOCK
EQ,PLL
EQ,PLL
ERASE AMP
HAP REC AMP (PB AMP)
HAP PB AMP
ERASE HEAD
REC HEAD
PB HEAD
AUDIO PROC BLOCK
SW
AUDIO I/O BLOCK
AUDIO AD/DA BLOCK
ANALOG IN
AES/EBU IN
I/O
AUDIO A/D
ANALOG OUT
AES/EBU OUT
MONITOR L/R
AUDIO JACK
I/O
AUDIO D/A
I/O
MONITOR D/A
OUTPUT CONTROL
SLOW CONTROL
CUE BLOCK
CUE AMP
ERASE CNTL
CUE HEAD
CUE ERASE
CTL ERASE
CUE IN/OUT
TC IN/OUT
SYSCON BLOCK
TC READER/ GENERATER
LTV/VITC CONTROL
SBC
SBC
ENCODER REMOTE
MPX
DA
PIO
AV CPU
DP-RAM
SERVO BLOCK
ATF CONTROL
SERVO CPU
CTL CONTROL
DRIVE CONTROL
FG & PG CONTROL
DRIVE BLOCK
CTL AMP
MOTOR DRIVE
FG & PG AMP
SENSOR AMP
CTL HEAD
CYL
CAP
REEL S
REEL T
TENSION SENSOR
SYS JACK
RS422 IN
RS422 OUT
RS232C
PARALLEL
REMOTE CONTROL
REMOTE CPU
DP-RAM
MAIN CPU M37702
DP-RAM
MOTOR DRIVE
LOADING
REEL TABLE
SOL. DRIVE
T BRAKE SOL.
S BRAKE SOL.
PINCH SOL.
SENSOR AMP
SENSOR
HEADPHONE
FRONT KEY & DISPLAY
FRONT CPU
S I/O

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Mechanical Chassis Assembly(2) PRT-3
Sub Chassis Assembly PRT-5
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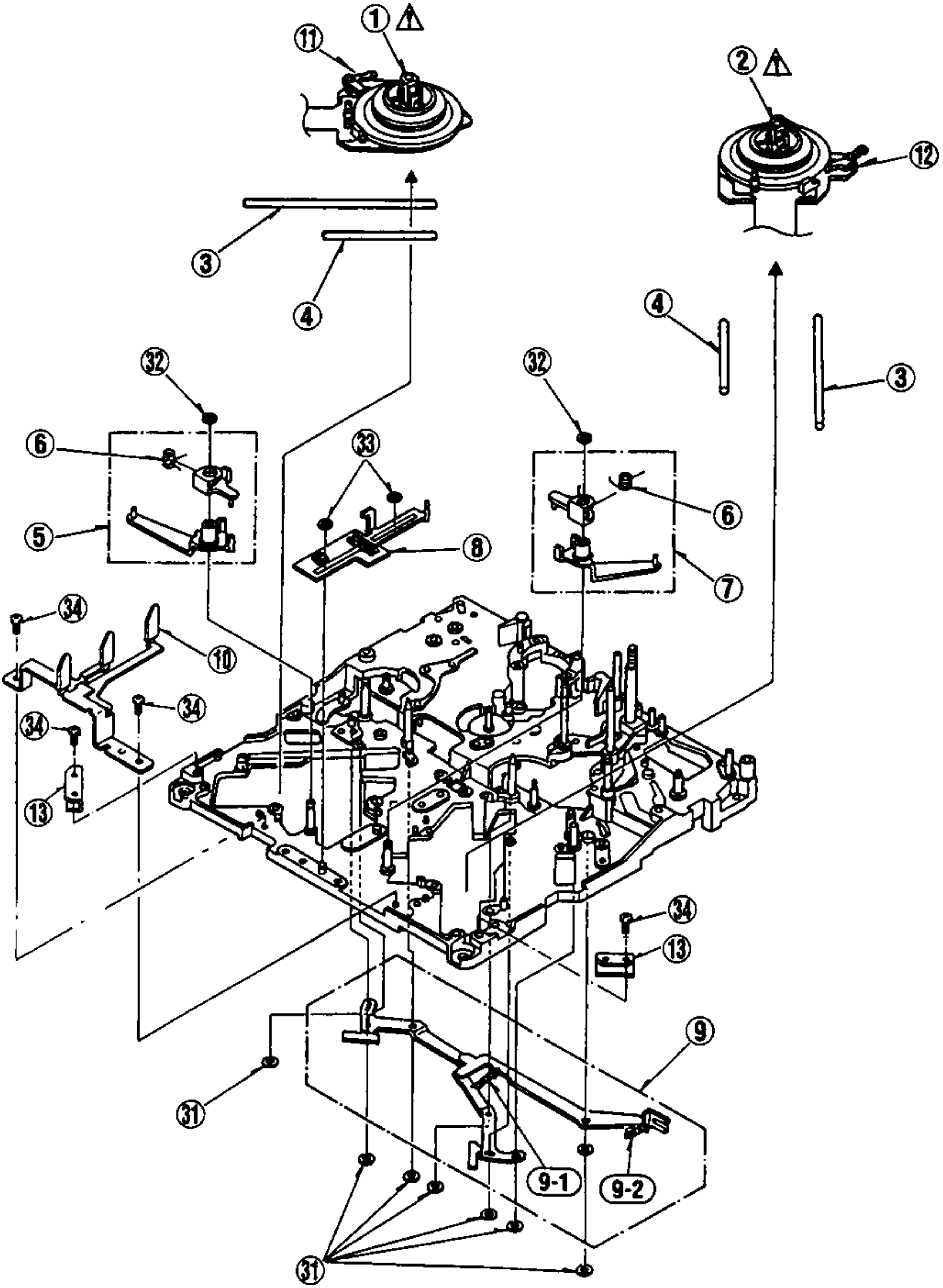
SERVICING FIXTURES & TOOLS

Ref. No.	Part No.	Part Name & Descriptio	Pcs	Remarks
1	VFK1145	BACK TENSION METER	1	
2	VFK1149	POST DRIVER	1	
3	VFK71	DIAL TORQUE GAUGE (150G)	1	
4	VFK1191	DIAL TORQUE GAUGE (45G)	1	
5	VFK1152	DIAL TORQUE GAUGE ADAPTOR	1	
6	VFK0357	ECCENTORIC SCREWDRIVER	1	
7	VFL1154	POST HEIGHT FIXTURE	1	
8	VFK1153	MECH. NEUTRAL PLATE	1	
9	VFK0906	OIL	1	
10	VFK1155	REV POSITION TOOL	1	
11	VFK1156	PLAY POSITION TOOL	1	
12	VFK1208	NEUTRAL POSITION TOOL	1	
13	VFK1150	NUT DRIVER (5.5MM)	1	
14	VFK1151	NUT DRIVER (2.5MM)	1	
15	VFK1188	DIAL TENSION GAUGE (30G)	1	
16	VFK0948A	CHECK LIGHT	1	
17	VFK0749	FROIRAL GREASE	1	
18	MOR265	MORLYTONE GREASE	1	
19	VFK1146	PHILIPS DRIVER (FINE)	1	
20	VFK1147	PHILIPS DRIVER (FINE)	1	
21	VFK1148	HEX. DRIVER (1.5)	1	
22	VFK1178	HEX. DRIVER (0.89)	1	
23	VFK1179	HEX. DRIVER (0.71)	1	
24	VFK1190	HEX. WRENCH	1	
25	VFK1209	TORQUE DRIVER	1	
26	VFK1375	POST AXIS DRIVER (1.5MM)	1	
27	VFK1300	A/D BOARD	1	
28	VFM3580KM	ALIGNMENT TAPE (NO.1)	1	FOR NTSC
29	VFM3581KM	ALIGNMENT TAPE (NO.2)	1	FOR NTSC
30	VFM3582KM	ALIGNMENT TAPE (NO.3)	1	FOR NTSC
31	VFM3680KM	ALIGNMENT TAPE (NO.1)	1	FOR PAL
32	VFM3681KM	ALIGNMENT TAPE (NO.2)	1	FOR PAL
33	VFM3682KM	ALIGNMENT TAPE (NO.3)	1	FOR PAL
34	VFM3000EDS	ALIGNMENT TAPE (DV LISTA)	1	
35	VFM3010EDS	ALIGNMENT TAPE	1	
36	VFM3110EDS	ALIGNMENT TAPE	1	
37	AJ-CL12MP	CLEANING TAPE	1	
38	VFK1481	LISTA SOFTWARE	1	
39	VFK1186	LISTA CABLE	1	
40	VFK1423	TAPE DET. SENSOR CASSETTE	1	
41	VZZ0085	CLEANING CROSS	1	
42	VFK1248A	FLASH ROM VERSION UP SOFT	1	
43	VFK1304A	ROM REWRITER	1	
44	VFK1305	120P EXTENDER	1	
45	VFK1307	70P EXTENDER	1	
46	VFK1306	52P EXTENDER	1	
47	VFK0369	TWEEZERS	1	
48	VFK0371	RADIO PRIER	1	
49	VFK0372	CUTTER PRIER	1	
50	VFK0338	TRIMMER ADJUSTMENT DRIVER	1	
51	VFK0337	PHILIPS DRIVER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
▪ 1	VEM0686	S REEL MOTOR A ASS'Y	1	(M)
▪ 2	VEM0687	T REEL MOTOR A ASS'Y	1	(M)
3	VMS5923	REEL OUTER RAIL	2	
4	VMS5924	REEL INNER RAIL	2	
5	VXL2589	S BASE DRIVE ARM ASS'Y	1	
6	VMB2944	CHARGE SPRING	2	
7	VXL2590	T BASE DRIVE ARM ASS'Y	1	
8	VXA5625	SLIDE ROD ASS'Y	1	
9	VXL2597	M STOPPER DRIVE ARM ASS'Y	1	
9-1	VMB2955	M STOPPER SPRING (1)	1	
9-2	VMB3017	M STOPPER SPRING (2)	1	
10	VXA6174	L-M RELEASE ANGLE ASS'Y	1	
11	VXZ0439	S BRAKE ARM ASS'Y	1	
12	VXZ0440	T BRAKE ARM ASS'Y	1	
13	VMZ2603	REEL FLEX COVER	2	
31	VMX1061	WASHER	7	
32	VMX1079	CUT WASHER	2	
33	VMX1394	CUT WASHER	2	
34	XQN2+CF3	SCREW	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks



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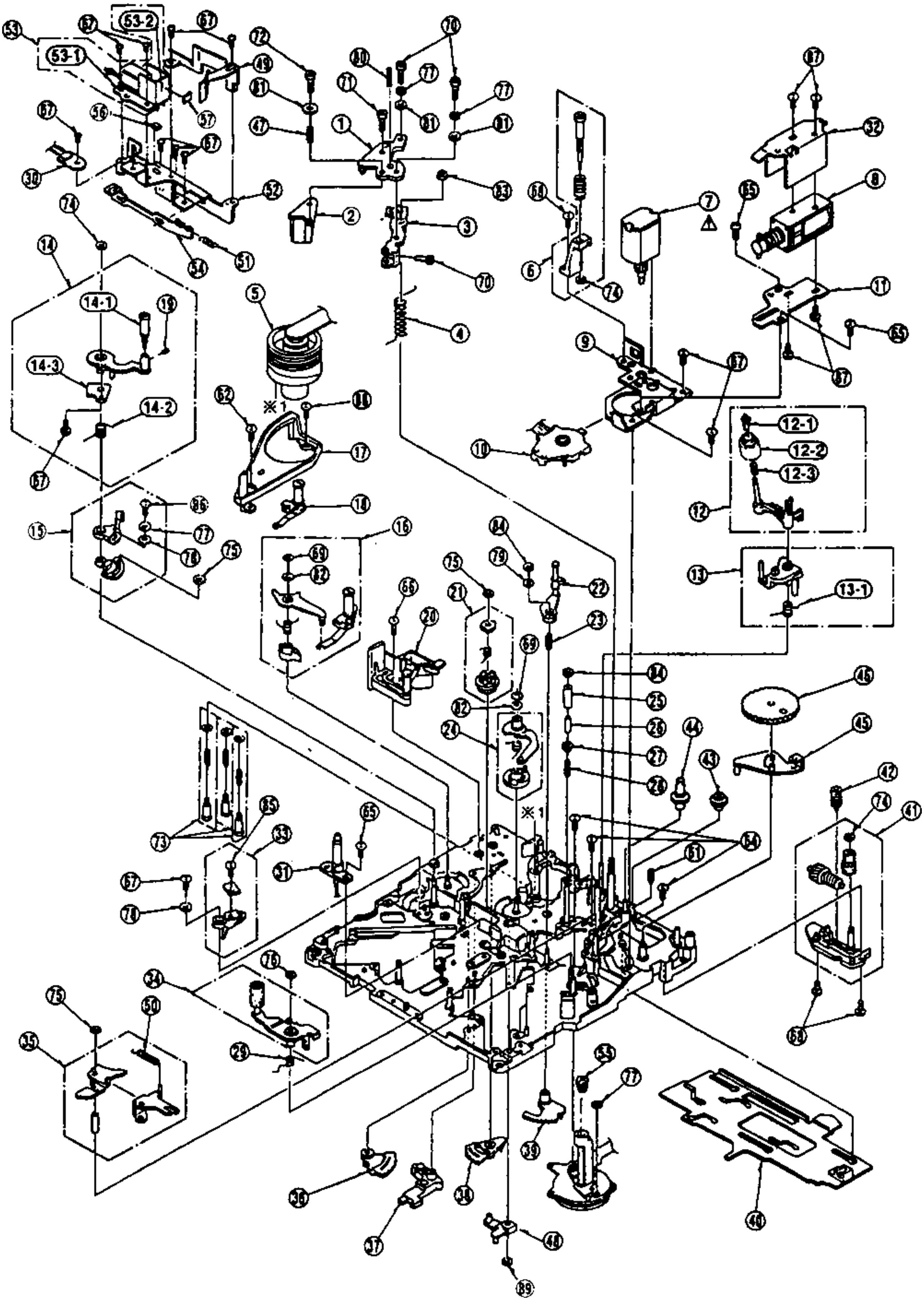
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA5554	A/C HEAD BASE (1) ASS'Y	1	
2	VED0419	A/C HEAD	1	(M)
3	VXA6067	A/C HEAD BASE (2) ASS'Y	1	
4	VMB2935	A/C HEAD HIGHT SPRING	1	
5	VEG1498	CYLINDER UNIT	1	(M)
6	VXA5715	EMARGENCY SHIFT HOLDER	1	
▪ 7	VEM0645	LOADING MOTOR (1)A ASS'Y	1	(M)
8	VSJ0227	PINCH SOLENOID	1	(M)
9	VXA5584	MOTOR ANGLE ASS'Y	1	
10	VES0814	MODE SW ASS'Y	1	(M)
11	VMA9376	PINCH SOLENOID BASE	1	
12	VXL2748	CLEANING ARM A ASS'Y	1	(M)
12-1	VMX2150	CLEANER ROLLER HOLDER	1	
12-2	VXP1808	CLEANER ROLLER ASS'Y	1	
12-3	VMB3114	CLEANER ROLLER SPRING	1	
13	VXL2870	T2 ARM ASS'Y	1	
13-1	VMB3304	T2 ARM SPRING	1	
14	VXL2831	TENSION ARM A ASS'Y	1	(M)
14-1	VXP1761	TENSION ROLLER	1	
14-2	VMB3220	TENSION LEG SPRING	1	
14-3	VXA6173	MAGNET HOLDER ASS'Y	1	
15	VXA5791	TENSION LEG SPRING HOOK	1	
16	VXL2709	S1 LOADING ARM ASS'Y	1	(M)
17	VMD2533	LOADING RAIL	1	
18	VXA6378	T1 BOAT ASS'Y	1	(M)
19	VHD0561	HEX SCREW	1	
20	VXA6052	S POST BASE AU.	1	(M)
21	VXP1683	T4 CONNECTION GEAR ASS'Y	1	
22	VXL2772	T4 ARM ASS'Y	1	
23	VMB2950	T4 THRUST SPRING	1	
24	VXL2898	T LOADING ARM N ASS'Y	1	
25	VMS5906	T3 UPPER FRANGE	1	
26	VMS5905	T3 SLEEVE	1	
27	VMS5904	T3 LOWER FRANGE	1	
28	VMB2929	T3 SPRING	1	
29	VMB2933	PINCH RELEASE SPRING	1	
30	VEK7927	INSULLATION SENSOR	1	
31	VEK7691	LED HOLDER P.C.BOARD	1	
32	VMA9411	PINCH SOLENOID ANGLE	1	
33	VXA5820	TENSION SENSOR ASS'Y	1	
34	VXL2835	PINCH ARM ASS'Y	1	(M)
35	VXL2588	PINCH GUIDE ARM ASS'Y	1	
36	VXA5570	T SECTOR GEAR ASS'Y	1	
37	VXL2838	TENSION LEG. GUIDE ARM	1	
38	VXA5567	S SECTOR GEAR ASS'Y	1	
39	VXA5564	T4 SECTOR GEAR ASS'Y	1	
40	VXA5563	MAIN ROD ASS'Y	1	
41	VXA5627	THRUST SHAFT HOLDER ASS'Y	1	
42	VDG1166	MOTOR WARM GEAR	1	
43	VDG1268	MOTOR EMARGENCY GEAR A(A)	1	
44	VDG1267	MOTOR EMARGENCY GEAR B(A)	1	
45	VXL2889	MAIN CAM ARM ASS'Y	1	
46	VDG1168	MAIN CAM GEAR	1	(M)
47	VMB2937	A/C HEAD ADJUST SPRING	1	
48	VXL2600	EJECT ARM ASS'Y	1	
49	VMD3475	T1 GUIDE ASS'Y	1	
50	VMB2934	SPRING	1	
51	VMB3051	CLEANER RETURN SPRING	1	
52	VXA6077	CLEANER BASE 1 ASS'Y	1	
53	VXA6078	CLEANER SOLENOID ASS'Y	1	
53-1	VSJ0226	CLEANER SOLENOID	1	(M)
53-2	VMA9877	CLEANER SOLENOID BASE	1	
54	VMM0429	CLEANER INTERLOCK	1	
55	VXQ0556	THRUST SCREW ASS'Y	1	(M)
56	VMT0871	SILENCER A	1	
57	VMT0872	SILENCER B	1	
61	VHD0356	SCREW	1	
62	XQN2+A3	SCREW	1	
64	XQN2+A35FZ	SCREW	3	
65	XQN2+AM2	SCREW	3	
66	XQN2+AM4	SCREW	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
67	XQN2+CF3	SCREW	12	
68	XQN2+CF4	SCREW	3	
69	XUC12FP	E-RING	2	
70	XVE2B4FZ	HEX SCREW	3	
71	XVE2B6FP	HEX SCREW	1	
72	XVE2B12FP	HEX SCREW	1	
73	VXQ0439	SCREW	3	
74	VMX0967	CUT WASHER	3	
75	VMX1061	WASHER	3	
76	VMX1079	CUT WASHER	1	
77	XWA2B	WASHER	4	
78	XWE2	WASHER	2	
79	XWE16VW	WASHER	1	
80	XXE2A6FP	HEX SCREW	1	
81	XWG2	WASHER	3	
82	XWGV15Z32G	WASHER	2	
83	VHD0045	NYLON NUT	1	
84	VHN0312	NUT	2	
85	XQN2+AQ3.5FZ	SCREW	1	
86	XQN2+AJ5	SCREW	1	
87	XQN2+A1.5	SCREW	4	
88	XQN2+A4	SCREW	1	
89	VMX1394	CUT WASHER	1	
*	VXY1431Z1	MECHANISM	1	(M)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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXL2656	MIC DRIVE ARM (A) ASS'Y	1	
2	VMB3018	MIC DRIVE SPRING	1	
3	VXL2657	MIC DRIVE ARM (B) ASS'Y	1	
4	VDB1429	MIC DRIVE ARM BOSS	1	
5	VXL2613	REEL DRIVE ARM ASS'Y	1	
6	VDG1192	REEL DRIVE CAM GEAR	1	
7	VDG1193	REEL DRIVE WORM WHEEL	1	
8	VEM0585	REEL DRIVE MOTOR ASS'Y	1	(M)
9	VDG1211	MIC GENEVA GEAR	1	
10	VXP1698	REEL DRIVE WORM ASS'Y	1	
11	VXA5628	MOTOR BASE ASS'Y	1	
12	VMB3019	MIC DRIVE RETURN SPRING	1	
13	VEK7726	REEL SENSOR P.C.BOARD	1	
14	VSJ0216	BRAKE SOLENOID	3	(M)
15	VXA5575	S-BRAKE SOLENOID BASE	1	
17	VXA6199	DISTINCTION SW ASS'Y	1	(M)
18	VXA5579	M STOPPER SOLENOID ASS'Y	1	
19	VXA5887	T-BRAKE SOLENOID BASE ASS	1	
20	VXK1336	SUB CHASSIS	1	
21	VEK7692	SENSOR HOLDER ASS'Y	1	
22	VMS6193	T BRAKE RELEASE ARM SHAFT	1	
23	VMB2957	S BRAKE SPRING	1	
24	VMB2987	T BRAKE SPRING	1	
31	XQN2+CF3	SCREW	13	
32	XYN26+K6	SCREW	4	
33	XQN2+A1.5	SCREW	2	
34	XQN2+A2	SCREW	2	
35	VMX1079	CUT WASHER	5	
36	VMX0967	CUT WASHER	4	
37	VMX1548	CUT WASHER	2	
38	XQN2+A1.5	SCREW	4	
E27	VEP82216B	MECH I/F P.C.BOARD	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

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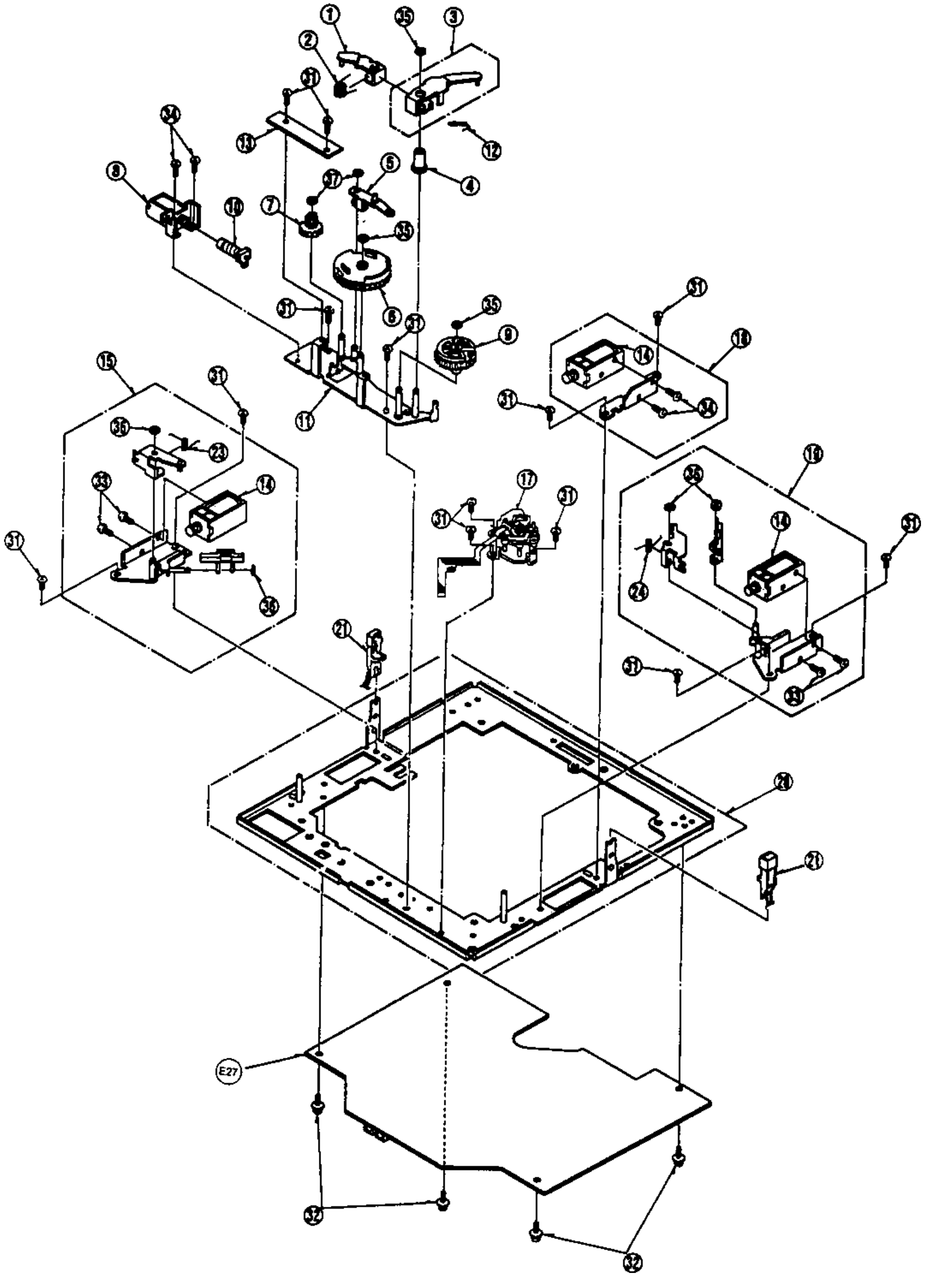

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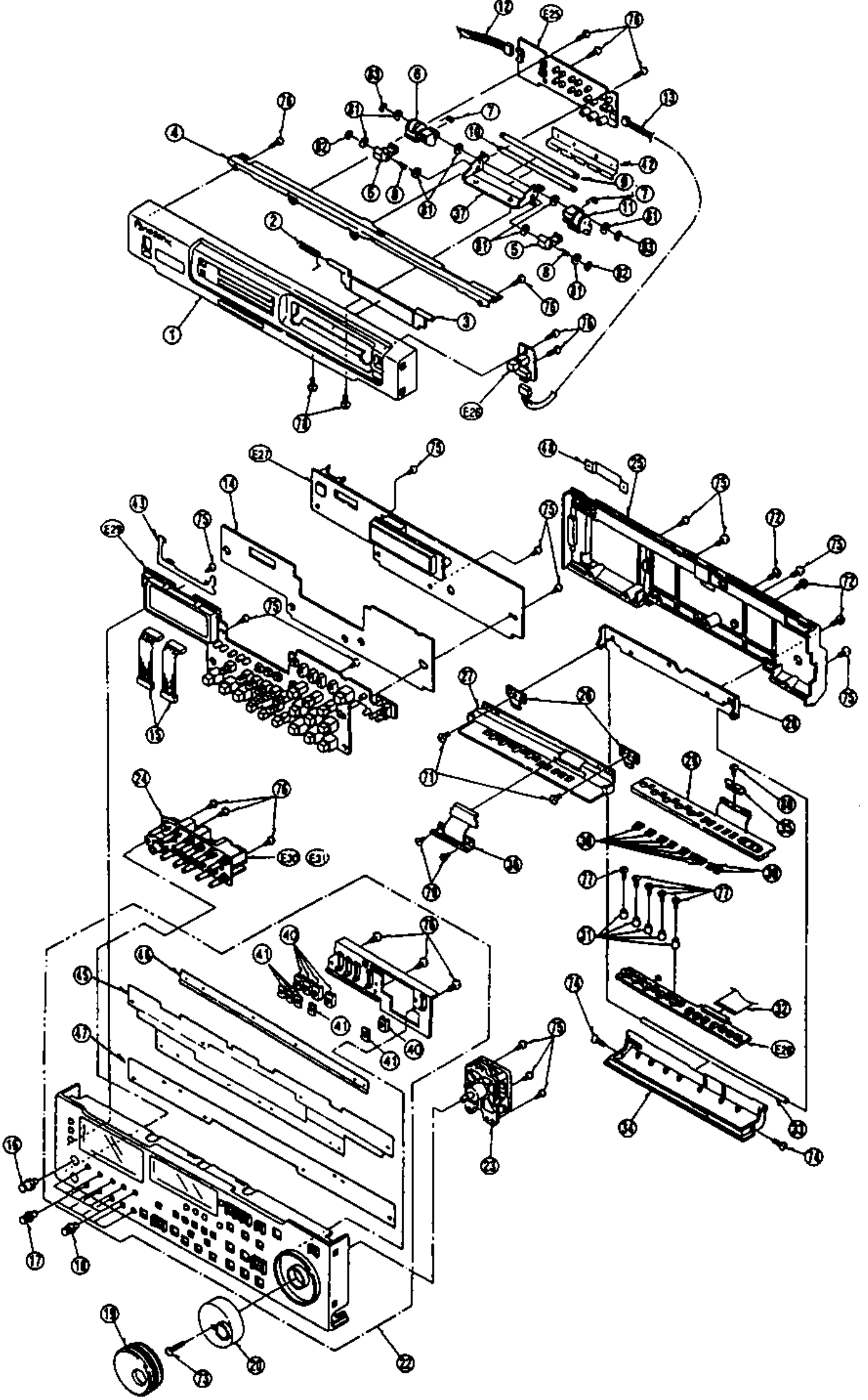
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYP6737	UPPER FRONT PANEL 1 ASS'Y	1	FOR AJ-D850P
1	VYP6737	UPPER FRONT PANEL 1 ASS'Y	1	FOR AJ-D850E
2	VMB2923	BLINDER SPRING	1	
3	VKF2785	BLINDER PANEL	1	
4	VMP4864	UPPER FRONT PANEL ANGLE	1	
5	VDK0147	CASSETTE GUIDE CAM	2	
6	VGQ4009	CASSETTE GUIDE (L)	1	
7	VMB2922	CASSETTE GUIDE SPRING	2	
8	VMB2986	CAM SPRING	2	
9	VMS5864	CASSETTE COVER	1	
10	VMS6017	GUIDE CAM SHAFT	1	
11	VGQ4010	CASSETTE GUIDE (R)	1	
12	VEE9649	UP FRONT CONNECTION CABLE 1	1	
13	VEE9650	UP FRONT CONNECTION CABLE 2	1	
14	VMZ2501	INSULATION SHEET	1	
15	VEE9640	FRONT SW CABLE	2	
16	VGU5334	LEVER VR KNOB	1	
17	VXU0768-1	VR KNOB ASS'Y	3	
18	VXU1160	REC VR KNOB ASS'Y	4	
19	VGU5780	SEARCH DIAL COVER	1	
20	VGU8126	SEARCH DIAL KNOB	1	
22	VYP6732	LOWER FRONT PANEL 1 ASS'Y	1	
23	VSP1097	SEARCH DIAL	1	
24	VMP4860	VR ANGLE	1	
25	VKU0513	BACK COVER	1	FOR AJ-D850P
25	VKU0524	BACK COVER	1	FOR AJ-D850E
26	VMB2978	LEAF SPRING	2	
27	VGM1288	SUB CONTROL SUPPORT ANGLE	1	
28	VGM1287	SUB CONTROL ANGLE	1	
29	VGM1269	SUB SW ANGLE	1	FOR AJ-D850P
29	VGM1359	SUB SW ANGLE	1	FOR AJ-D850E
30	VGU7179	SLIDE SW KNOB	10	
32	VWJ28C2120L0	FR CPU SUB FFC	1	
33	VMS6012	SHAFT	1	
34	VKF2497	SUB SW DOOR	1	
35	VMC1241	EARTH PLATE	1	
36	VMP5091	EARTH PLATE SUB	1	
37	VMP4863	CASSETTE GUIDE ANGLE	1	
38	VMC1277	HEAD PHONE EARTH SPRING	1	
39	VMZ2671	SPACER	1	
40	VGU5287	SLIDE KNOB	5	
41	VGF0659	SLIDE KNOB SHEET	5	
42	VMC1319	FRAME EARTH PLATE	1	FOR AJ-D850E
43	VMP5259	FIXING PLATE	1	FOR AJ-D850E
45	VSC4594	PANEL EARTH SHEET	1	FOR AJ-D850E
46	VMP5262	INSTALLTION PANEL A	1	FOR AJ-D850E
47	VMC1317	INSTALLTION PANEL A	1	FOR AJ-D850E
48	VMP5260	FRONT SW CABLE ANGLE	1	FOR AJ-D850E
71	XSB3+6FZ	SCREW	2	
72	XSB3+8FZ	SCREW	3	
73	XSN2+8	SCREW	1	
74	XSS26+6FZ	SCREW	2	
75	XTN4+10G	SCREW	13	
76	XTV3+8G	SCREW	16	
77	XQN14+C4	SCREW	5	
78	XTV3+8F	SCREW	2	
79	XSN2+3	SCREW	2	
80	XSN26+3	SCREW	1	
81	VMX2562	WASHER	8	
82	XUC2FP	E-RING	2	
83	XUC25FP	E-RING	2	
84	XSB3+4	SCREW	1	FOR AJ-D850E
85	XSB26+5	SCREW	1	FOR AJ-D850E
86	XTV3+6F	SCREW	2	
E20	VEP80A76A	UP FRONT 1 P.C.BOARD	1	
E21	VEP80852A	UP FRONT 2 P.C.BOARD	1	
E22	VEP86263B	UP FRONT 2 P.C.BOARD	1	
E23	VEP86148A	FRONT CPU SUB P.C.BOARD	1	
E24	VEP80A49B	FRONT SW P.C.BOARD	1	
E25	VEP80963C	FRONT VR 1 P.C.BOARD	1	
E26	VEP80964C	FRONT VR 2 P.C.BOARD	1	

FRONT PANEL ASSEMBLY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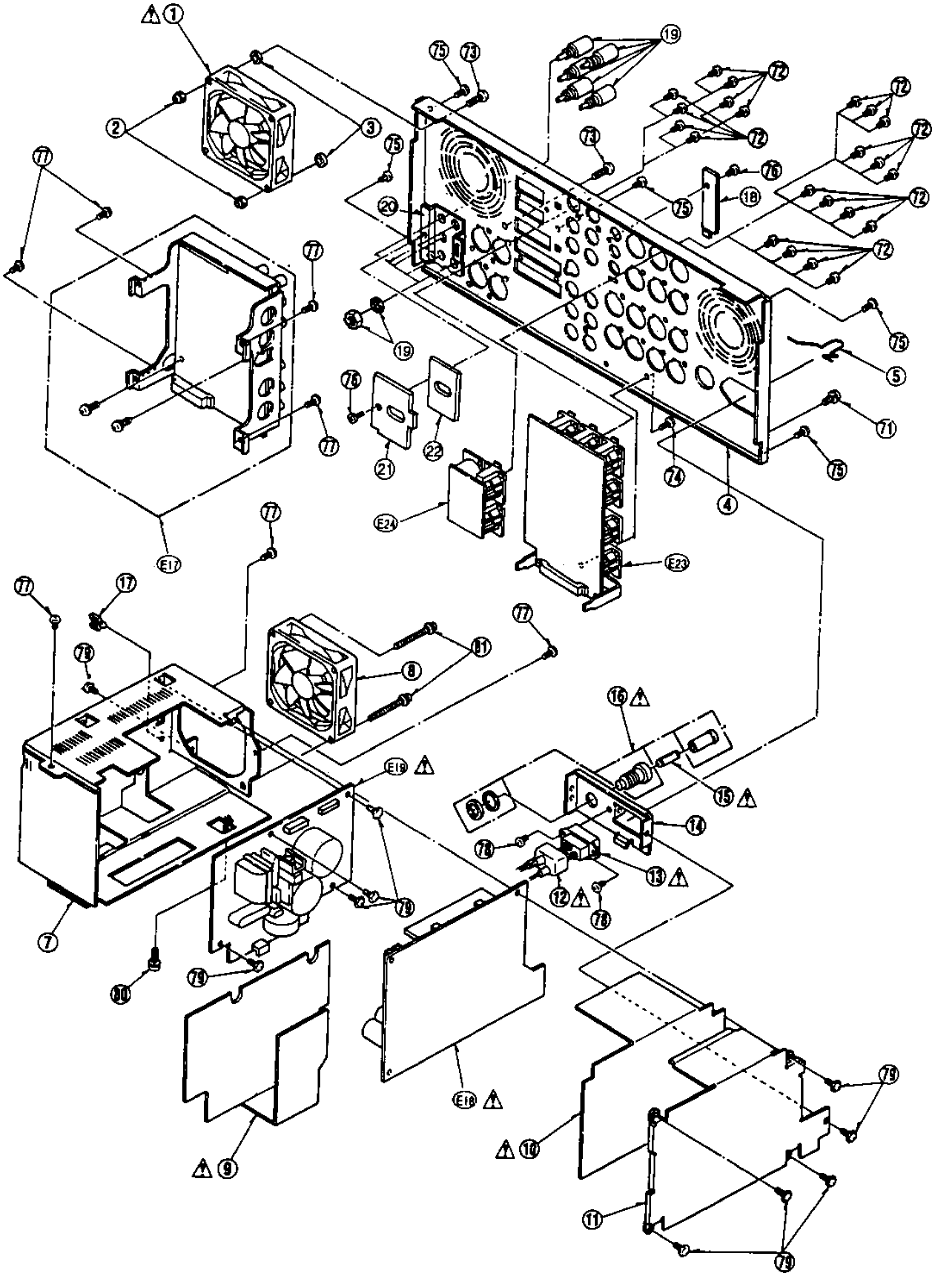
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VRF0190	FAN MOTOR	1	
2	VHN0063	NYLON NUT	2	
3	VMX0835	SPACER	2	
▪ 4	VJH0939	JACK PANEL	1	FOR AJ-D850P
4	VJH1079	JACK PANEL	1	FOR AJ-D850E
5	VML2903	AC CORD HOOK	1	
7	VSC4387	POWER SUPPLY CASE A	1	
8	VRF0190	FAN MOTOR	1	
9	VMZ2502	SHIELD SHEET A	1	
10	VMZ2503	SHIELD SHEET B	1	
11	VSC4388	POWER SUPPLY CASE B	1	
▪ 12	VMZ1252	AC INLET COVER	1	
▪ 13	VJP0083	AC INLET	1	
14	VMP4889	AC INLET BRACKET	1	
15	XBA1C50NB5	FUSE	1	FOR AJ-D850P
▪ 15	XBA2C40TH15	FUSE	1	FOR AJ-D850E
▪ 16	VJF1005	FUSE HOLDER	1	
17	VJF0285	WIRE LOCKING SADDLE	4	
23	VMP5032	OPTION PANEL	1	
24	VEE9648	AES/EBU CABLE	1	
25	VMT0884	GASKET (O)	1	FOR AJ-D850E
▪ 26	VEK8447	POWER SUPPLY ASS'Y	1	FOR AJ-D850P
▪ 26	VEK8448	POWER SUPPLY ASS'Y	1	FOR AJ-D850E
71	VHD0426	SCREW	1	
72	XSN26+6FZ	SCREW	22	
73	XSN4+35FC	SCREW	2	
74	XTN26+6FFZ	SCREW	1	
75	XTV3+6F	SCREW	5	
76	XTV3+6FFZ	SCREW	2	
77	XTV3+6FFR	SCREW	7	
78	XSB3+6FZ	SCREW	2	
79	XTW3+8LR	SCREW	10	
80	XYE4+EF8	SCREW	1	
81	XYNV4+K35FCS	SCREW	2	
E14	VEP83224A	V/S JACK P.C.BOARD	1	
E15	VEP81183A	POWER 1 P.C.BOARD	1	
E16	VEP81184B	POWER 2 P.C.BOARD	1	
E18	VEP84183A	A JACK P.C.BOARD	1	
E19	VEP84187A	AES/EBU P.C.BOARD	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

REAR PANEL ASSEMBLY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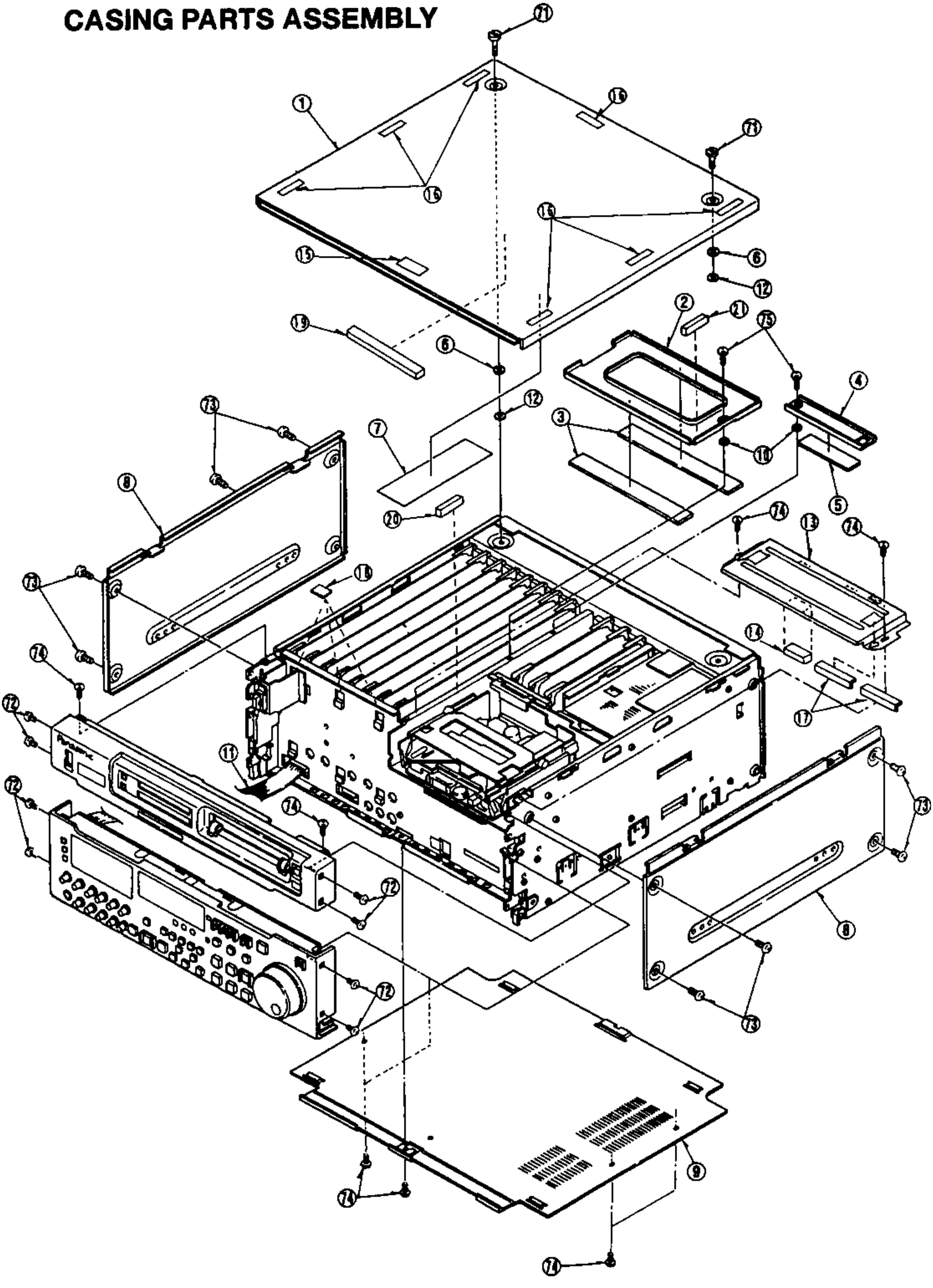
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VYP6496	TOP PANEL	1	
2	VMP4884	P.C.BOARD PLATE L	1	
3	VMX2511	P.C.BOARD RUBBER CUSHION L	2	
4	VMP4885	P.C.BOARD PLATE S	1	
5	VMX2512	P.C.BOARD RUBBER CUSHION S	1	
6	VMX2510	SPACER	2	
7	VMZ2325	TOP PANEL BARRIER	1	
8	VGM1567	SIDE PANEL	2	FOR AJ-D850P
8	VGM1271	SIDE PANEL	1	FOR AJ-D850E
9	VKU0514	BOTTOM PLATE	1	
10	VMX1558	NYLON WASHER	2	
11	VEE9641	FRONT CABLE	1	
12	VMX2582	WASHER	2	
13	VMP5265	CARRIAGE SUPPORT	1	
14	VMT0797	GASKET C	1	
15	VMT0509	GASKET (B)	1	FOR AJ-D850E
16	VMT0800	GASKET (C)	1	FOR AJ-D850E
17	VMT0776	GASKET (F)	1	FOR AJ-D850E
18	VMT0797	GASKET C	3	
19	VMT0785	DUST PROOF CUSHION (B)	1	
20	VMT0786	DUST PROOF CUSHION (C)	1	
21	VMT0890	DUST PROOF CUSHION (C)	1	
75	XYN3+K8	SCREW	2	
74	XTV3+6F	SCREW	3	
73	XSB4+8FC	SCREW	8	
72	XSB3+8FZ	SCREW	8	
71	VHD0274	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

CASING PARTS ASSEMBLY



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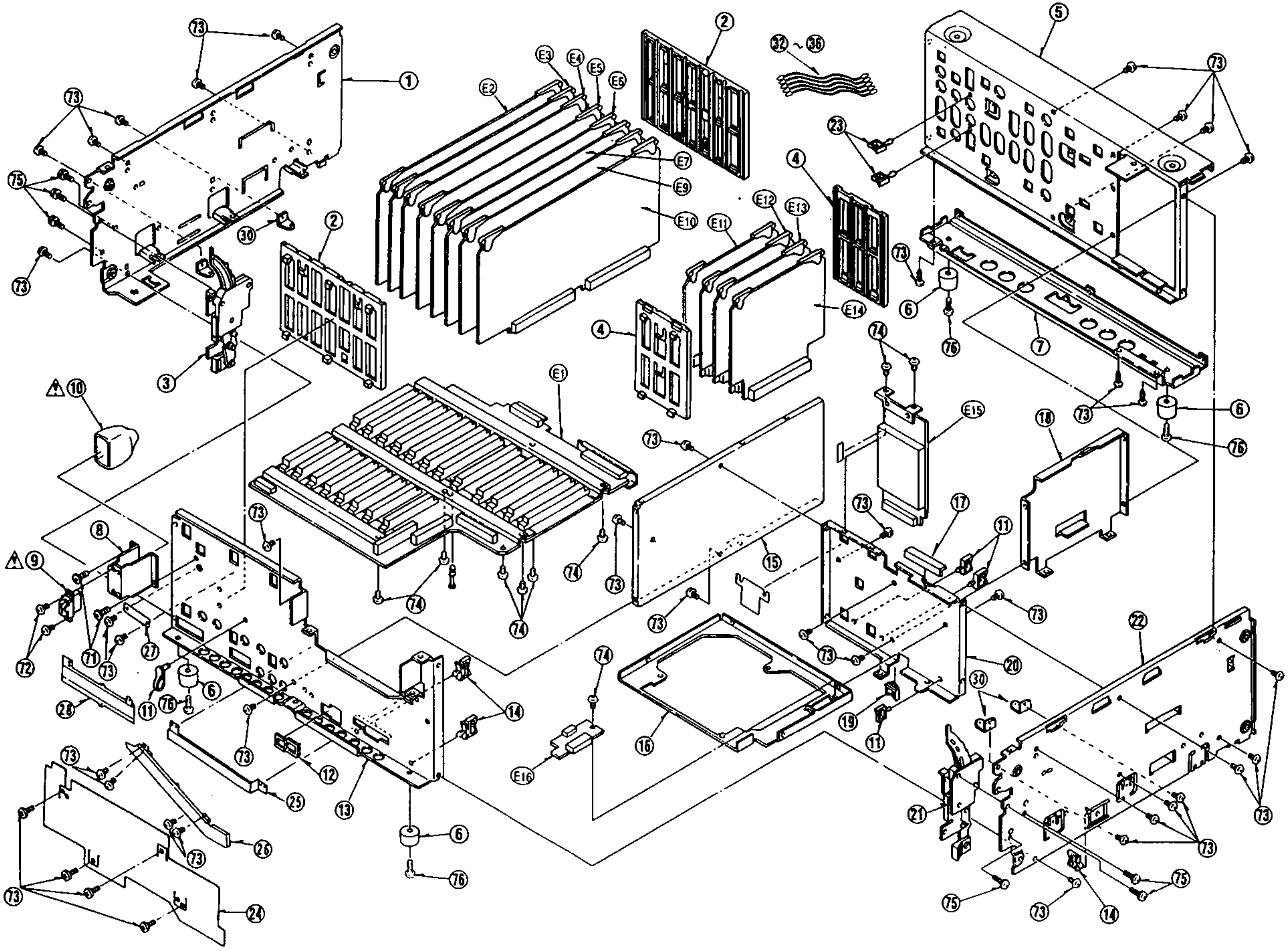
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VMP4871	LEFT SIDE FRAME	1	
2	VGQ4011	P.C.BOARD GUIDE RAIL A	2	
3	VYQ1258	ROTARY BRACKET L	1	
4	VGQ4012	P.C.BOARD GUIDE RAIL B	2	
5	VMP4877	REAR FRAME	1	
6	VKA0117	PLASTIC FOOT	4	
7	VMP4878	BOTTOM FRAME	1	
8	VMP4881	SW BRACKET	1	
▪ 9	EST15372T	POWER SWITCH	1	FOR AJ-D850P
9	EST15367T	POWER SWITCH	1	FOR AJ-D850E
▪ 10	VMZ0580	SW COVER	1	
11	VJF0285	WIRE LOCKING SADDLE	4	
12	VJF1259	EDGE HOLDER	1	
13	VMP4876	FRONT FRAME	1	
14	VJF0004	WIRE SADDLE	3	
15	VMP4873	CENTER FRAME	1	
16	VXA5550	MECHANISM FRAME ASS'Y	1	
17	VGF0715	INSULATION SHEET	1	
18	VMP4874	CENTER SUB FRAME	1	
19	VGQ1543	EDGE GUARD	1	
20	VMP4875	MIDDLE FRAME	1	
21	VYQ1259	ROTARY BRACKET R	1	
22	VMP4872	SIDE FRAME R	1	
23	VJF0384	CLAMPER	2	
25	VMP5264	FPC SHIELD COVER	1	
26	VSC4384	POWER CABLE COVER	1	FOR AJ-D850E
27	VMC1318	FRAME EARTH METAL	1	FOR AJ-D850E
28	VMP5263	SHIELD COVER	1	FOR AJ-D850E
29	VMT0609	GASKET	1	FOR AJ-D850E
30	VMP5285	BOTTOM FRAME ANGLE	4	
31	VGF0714	BARRIER A	1	
32	VMT0873	GASKET (D)	10	
33	VMT0905	GASKET	2	
34	VEE0C19	POWER DC2 CABLE	1	
71	VHD5013	SCREW	2	
72	XTN3+6F	SCREW	2	
73	XTV3+6F	SCREW	27	
74	XTV3+6FFR	SCREW	9	
75	XYN3+C6	SCREW	6	
76	XYNV3+K12S	SCREW	4	
E1	VEP80A48A	MOTHER P.C.BOARD	1	
E2	VEP82220A	F1 SERVO P.C.BOARD	1	
E3	VEP86267A	F2 SYSCON P.C.BOARD	1	
E4	VEP83410C	F4 VIDEO OUT P.C.BOARD	1	
E5	VEP83394A	F5 REC PB P.C.BOARD	1	
E6	VEP83409B	F6 VIDEO IN P.C.BOARD	1	
E7	VEP84326A	F7 A PROC P.C.BOARD	1	
E8	VEP84301B	F8 A ADDA P.C.BOARD	1	
E9	VEP84302C	H2 CUE P.C.BOARD	1	
E10	VEP85048A	H3 EQ P.C.BOARD	1	
E12	VEP85151A	BUFFER AMP P.C.BOARD	1	
E13	VEP80991A	AC HEAD IF P.C.BOARD	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

CHASSIS FRAME ASSEMBLY

Components identified with the mark ⚠ have the special characteristics for safety.
When replacing any of these components, use only the same type.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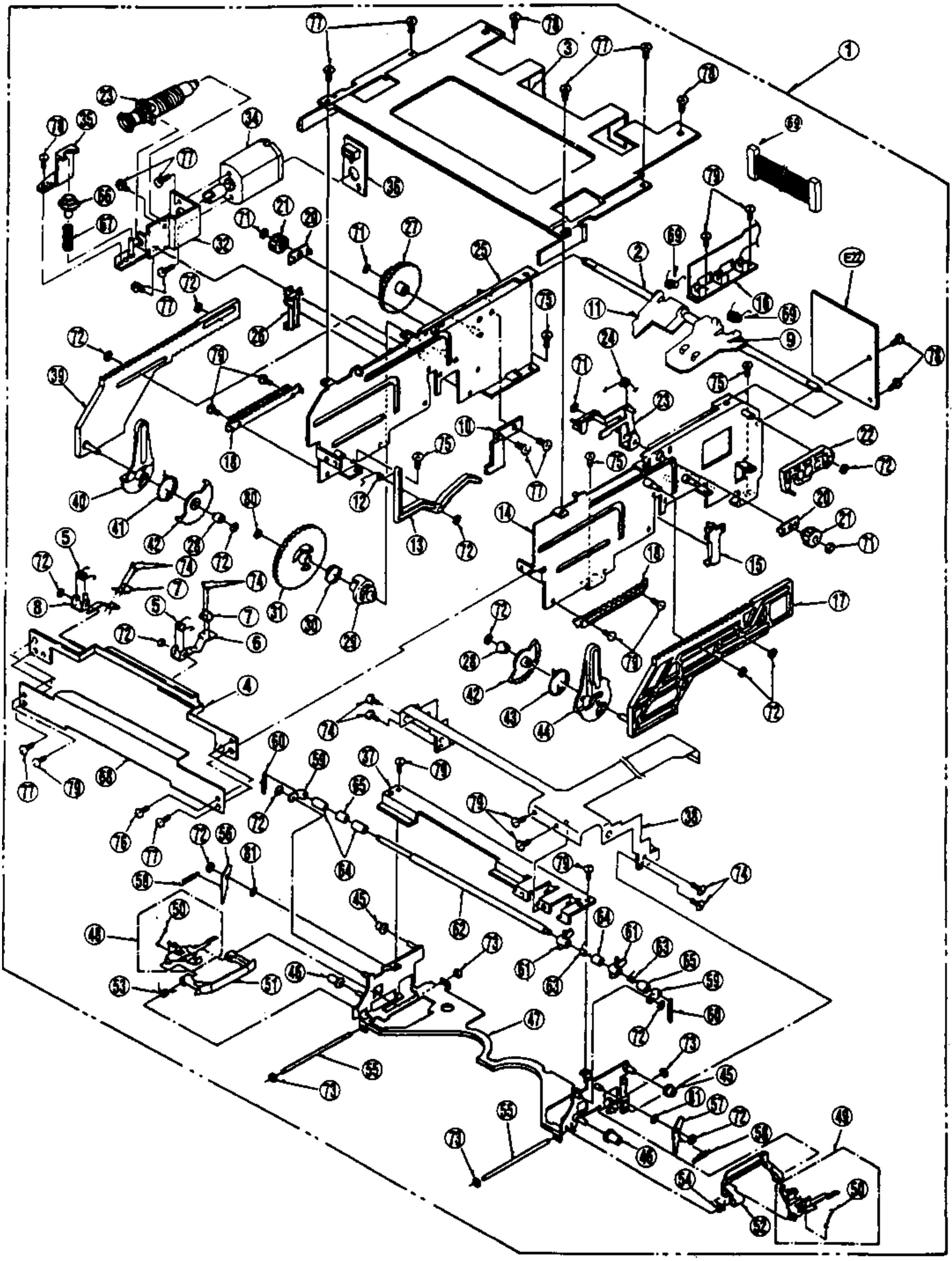
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VXA6070	CASSETTE COMPARTMENT	1	(M)
2	VMS5865	MAIN SHAFT	1	
3	VMA9849	TOP PLATE	1	
4	VXA5761	FRONT GUIDE 1 ASS'Y	1	
5	VMB3075	M GUIDE SPRING	2	
6	VML3191	M GUIDE RIGHT LEVER	1	
7	VML3192	M FRONT GUIDE	2	
8	VML3190	M GUIDE LEFT LEVER	1	
9	VML3397	CASSETTE PROTECT PLATE	1	
10	VMA9760	L OPENER	1	
12	VMB2926	SPRING	1	
13	VML2A50	BLINDER PANEL OPENER	1	
23	VXL2692	OPENER ANGLE ASS'Y	1	
14	VXA6074	R SIDE PLATE 1 ASS'Y	1	
15	VML3282	SUB RAIL (R)	1	
16	VEK7695	SIDE FLEXIBLE	1	
17	VXA5766	MAIN RACK R ASS'Y	1	
18	VDG1156	WIPER RACK	2	
20	VDB1395	MAIN SHAFT ANGLE	2	
21	VDG1155	INTERLOCK GEAR	2	
22	VML3193	OPENER DRIVE ARM	1	
24	VMB2979	SPRING	1	
25	VXA6072	SIDE PLATE L 1 ASS'Y	1	
26	VML3281	SUB RAIL (L)	1	
27	VDG1254	INTERMEDIATE GEAR	1	
28	VDP1643	WIPER ROLLER	2	
29	VDG1237	CLUTCH GEAR	1	
30	VMB2980	CLUTCH SPRING	1	
31	VDG1236	WORM WHEEL	1	
32	VXA5848	MOTOR ANGLE (A) ASS'Y	1	
33	VXP1797	E.E SLOT IN WORM ASS'Y	1	
34	VXA5597	MOTOR ASS'Y	1	(M)
35	VMA9673	EMARGENCY ANGLE	1	
36	VEK7793	MOTOR P.C.BOARD	1	
37	VMA9668	HOLDER PLATE	1	
38	VEK7715	HOLDER FLEXIBLE ASS'Y	1	
39	VXA6075	MAIN RACK (L) ASS'Y	1	
40	VML2A49	WIPER ARM L	1	
41	VMB2925	WIPER SPRING L	1	
42	VDG1163	WIPER GEAR	2	
43	VMB3013	WIPER SPRING R	1	
44	VML2A52	WIPER ARM R	1	
45	VDP1642	CASSETTE GUIDE ROLLER (2)	2	
46	VDP1641	CASSETTE GUIDE ROLLER (1)	2	
47	VXA5757	CASSETTE HOLDER 1 ASS'Y	1	
48	VXA5758	ROD L	1	
49	VXA5759	ROD R	1	
50	VMB3064	SLIDE SPRING	2	
51	VML3249	SIDE GUIDE L	1	
52	VML3250	SIDE GUIDE R	1	
53	VMB3061	SLIDE GUIDE SPRING L	1	
54	VMB3062	SLIDE GUIDE SPRING R	1	
55	VMS6108	KICK OFF ROD SHAFT	2	
56	VML2A54	KICK OFF ARM L	1	
57	VML2A55	KICK OFF ARM R	1	
58	VMB2928	KICK OFF SPRING	2	
59	VML2A53	CASSETTE HOLDER ARM	2	
60	VMB2927	CASSETTE HOLDER SPRING	2	
61	VMX2833	ML DETECTION ROLLER	2	
62	VMS5882	CASSETTE HOLDER SHAFT	1	
63	VMB3253	M-L DETECTION SPRING	2	
64	VMX2559	CASSETTE PRESSURE ROLLER(2)	3	
65	VMX2524	CASSETTE PRESSURE ROLLER(1)	1	
66	VDG1246	EMARGENCY GEAR	1	
67	VMB3109	EMARGENCY SPRING	1	
68	VMZ2661	FRONT GUIDE COVER	1	
71	VMX0653	CUT WASHER	4	
72	VMX0967	CUT WASHER	14	
73	VMX1061	WASHER	4	
74	XQN16+A2	SCREW	8	
75	XQN2+CF3	SCREW	4	
76	XQN2+A2	SCREW	2	
77	XYN2+C3	SCREW	12	
78	XQN2+A3	SCREW	5	
79	LMHD16064	SCREW	10	
80	XWGV2Y4G	WASHER	2	
81	XWGV2Z5G	WASHER	2	
E28	VEP80856A	CARRIGE P.C.BOARD	1	

CASSETTE COMPARTMENT ASSEMBLY



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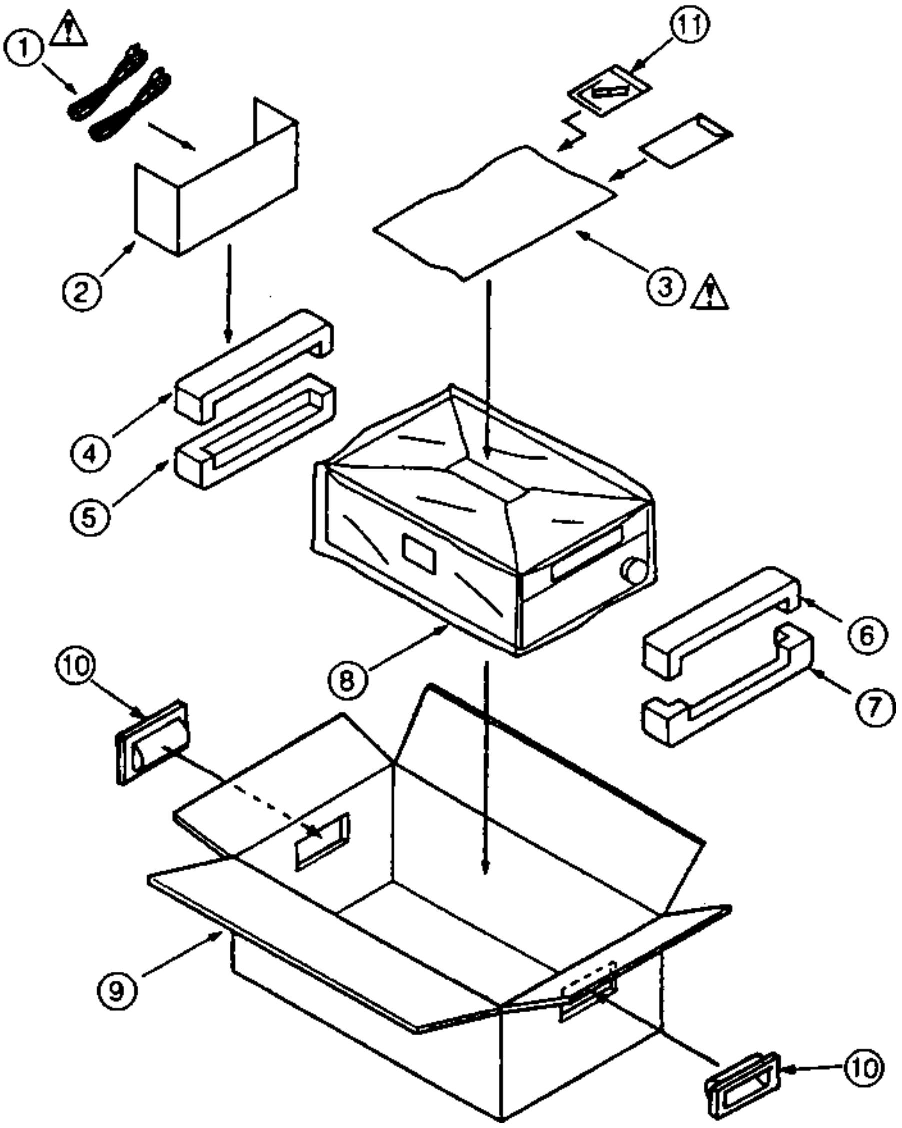
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
▪ 1	VJA0488	POWER CODE	1	FOR AJ-D850P
1	VJA0774	POWER CODE	1	FOR AJ-D850E
1	VJA0775	POWER CODE	1	FOR AJ-D850E
2	VPN4305	ACCESSORY PAD	1	
▪ 3	VQT7281	OPERATING INSTRUCTIONS	1	FOR AJ-D850P
3	VQT7282	OPERATING INSTRUCTIONS	1	FOR AJ-D850E
4	VPN4302	CUSHION UL	1	
5	VPN4304	CUSHION LL	1	
6	VPN4606	CUSHION UR	1	
7	VPN4607	CUSHION LR	1	
8	VPF0277	POLYETHYLENE BAG	1	FOR AJ-D850P
8	VPF0277	POLYETHYLENE BAG	1	FOR AJ-D850E
9	VPG9736	PACKING CASE	1	FOR AJ-D850P
9	VPG9737	PACKING CASE	1	FOR AJ-D850E
10	VPF0149	HANDLE	2	
11	VXF0159	EMARGENCY EJECT	1	

PACKING PARTS ASSEMBLY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Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E1	VEP80A48A	MOTHER P.C.BOARD	1	(RTL)
■E2	VEP82220A	F1 SERVO P.C.BOARD	1	(RTL)FOR AJ-D850P
■E2	VEP82220B	F1 SERVO P.C.BOARD	1	(RTL)FOR AJ-D850E
■E3	VEP86267A	F2 SYSCON P.C.BOARD	1	(RTL)FOR AJ-D850P
■E3	VEP86267B	F1 SYSCON P.C.BOARD	1	(RTL)FOR AJ-D850E
■E4	VEP83410C	F4 VIDEO OUT P.C.BOARD	1	(RTL)FOR AJ-D850P
■E4	VEP83410B	F4 VIDEO OUT P.C.BOARD	1	(RTL)FOR AJ-D850E
■E5	VEP83394A	F5 REC PB P.C.BOARD	1	(RTL)FOR AJ-D850P
■	VEP83405A	V BLK SUB P.C.BOARD	1	(RTL)FOR VEP83394A
■E5	VEP83394B	F5 REC PB P.C.BOARD	1	(RTL)FOR AJ-D850E
■	VEP83405B	V BLK SUB P.C.BOARD	1	(RTL)FOR VEP83394B
■E6	VEP83409B	F6 VIDEO IN P.C.BOARD	1	(RTL)FOR AJ-D850P
■E6	VEP83449A	F6 VIDEO IN P.C.BOARD	1	(RTL)FOR AJ-D850E
■E7	VEP84326A	F7 A PROCESS P.C.BOARD	1	(RTL)
■E8	VEP84301B	F8 A AD/DA P.C.BOARD	1	(RTL)
■E9	VEP84302C	H2 CUE P.C.BOARD	1	(RTL)
■E10	VEP85048A	H3 EQ P.C.BOARD	1	(RTL)
■E11	VEP85049A	H4 RF AMP P.C.BOARD	1	(RTL)
■E12	VEP85151A	HEAD BUFFER P.C.BOARD	1	(RTL)
■E13	VEP80991A	AC HEAD I/F P.C.BOARD	1	(RTL)
■E14	VEP83224A	V/S JACK P.C.BOARD	1	(RTL)
■E15	VEP81183A	POWER 1 P.C.BOARD	1	(RTL)
■E16	VEP81184B	POWER 2 P.C.BOARD	1	(RTL)
■E17	VEP80A58A	POWER INT P.C.BOARD	1	(RTL)
■E18	VEP84183A	A JACK P.C.BOARD	1	(RTL)
■E19	VEP84187A	AES/EBU P.C.BOARD	1	(RTL)
■E20	VEP80A76A	UP FRONT 1 P.C.BOARD	1	(RTL)
■E21	VEP80852A	UP FRONT 2 P.C.BOARD	1	(RTL)
■E22	VEP86263B	FRONT CPU P.C.BOARD	1	(RTL)
■E23	VEP86148A	FRONT CPU SUB P.C.BOARD	1	(RTL)
■E24	VEP80A49B	FRONT SW P.C.BOARD	1	(RTL)
■E25	VEP80963C	FRONT VR 1 P.C.BOARD	1	(RTL)
■E26	VEP80964C	FRONT VR 2 P.C.BOARD	1	(RTL)
■E27	VEP82216B	MECHA I/F P.C.BOARD	1	(RTL)
■E28	VEP80856A	CARRIGE P.C.BOARD	1	(RTL)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E1	VEP80A48A	MOTHER P.C.BOARD	1	(RTL)
P001-16	VJS3814	CONNECTOR (FEMALE)	16	
P018-20	VJS3814	CONNECTOR (FEMALE)	3	
P021	VJP2891B016	CONNECTOR (MALE)	1	
P022	VJP1248T	CONNECTOR (MALE) 8P	1	
P023	VJP2891A030	CONNECTOR (MALE)	1	
P024	VJP3418A080	CONNECTOR (MALE)	1	
P025	VJP2824B003	CONNECTOR (MALE)	1	
P026	VJP2824B009	CONNECTOR (MALE)	1	
P027	VJP2824B008	CONNECTOR (MALE)	1	
P029,30	VJS3375B060	CONNECTOR (FEMALE)	2	
P031	VJP3080	CONNECTOR (MALE)	1	
P032	VJP1230T	CONNECTOR (MALE) 3P	1	
P033	VJP3375A060	CONNECTOR (MALE)	1	
		MISCELLANEOUS		
	VKC0392	SPACER	2	
	VMP4868	XLR GUIDE ANGLE (B)	1	
	VMP5641	MOTHER ANGLE (A)	1	
	VMP5642	MOTHER ANGLE (B)	1	
	VMP5643	MOTHER ANGLE (C)	1	
	XYE3+EF8FZ	SCREW	10	
	XTV26+6F	SCREW	2	
	VMX2607	PB SPACER	1	
■E2	VEP82220A	F1 SERVO P.C.BOARD	1	(RTL)FOR AJ-D850P
■E2	VEP82220B	F1 SERVO P.C.BOARD	1	(RTL)FOR AJ-D850E
C1,C2	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C3	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5,C6	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C7	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C8,C9	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C10	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C11,12	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C13	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C14	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C15	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C30-34	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C35	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C36-38	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C39	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C40,41	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C42,43	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C60,61	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C63-74	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	12	
C80,81	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C82	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C83	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C84	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C85,86	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	2	
C87	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C88	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C89,90	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C91	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C92,93	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	2	
C94,95	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C120,21	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C123	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C124,25	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	2	
C126	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C127,28	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	2	
C129,30	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C131,32	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C133,34	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	2	
C135	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C160,61	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C162	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C163,64	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	2	
C165	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C166,67	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	2	
C168,69	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C170,71	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C172	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C173,74	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	2	
C175	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C200	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C202,03	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C204	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C205-07	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C208-10	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	3	
C211	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C212,13	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C214	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C215,16	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C218	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C230-32	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	3	
C233-36	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C237	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C238	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C239	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C240-44	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C246-49	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C250,51	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	2	
C260,61	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C263-70	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	8	
C280-84	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C286	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C300-02	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C303	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C304-08	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C309	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C310	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C320,21	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C322	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C323	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C324	ECUX1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C325,26	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C327,28	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C329	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C330	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C331-34	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C335,36	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	2	
C337	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C340	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C341	ECA1EXLV101	E.CAPACITOR 25V 100U	1	
C342,43	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C344	ECUX1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C345	ECA1EXLV101	E.CAPACITOR 25V 100U	1	
C346-48	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C349-53	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C354	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C355	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C356	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C357	ECUX1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C358	ECA1EXLV101	E.CAPACITOR 25V 100U	1	
C359	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C360	ECA1EXLV101	E.CAPACITOR 25V 100U	1	
C361	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C362	ECA1EXLV101	E.CAPACITOR 25V 100U	1	
C380,81	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C382	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C383	ECUX1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C384	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C385,86	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C387	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C388	ECUX1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C389	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C390	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C391	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C400	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C401-03	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C404-06	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C407	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C408	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C409-11	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C412	ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C413	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C414	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C415	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C416-18	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C419	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C420	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C421	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C422	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C423	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C424-27	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C428,29	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C430	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C431	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C432-34	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C450	ECUX1H223KBN	C.CAPACITOR CH 50V 0.22U	1	
C451,52	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C453,54	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C455	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C456	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C457	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C458,59	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	2	
C460	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C461	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C462	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C463	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C464	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C465	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C466	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C467	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C468,69	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C470	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C471	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C472	ECUX1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C473	ECUX1H223KBN	C.CAPACITOR CH 50V 0.22U	1	
C474,75	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	2	
C476	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C477,78	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	2	
C479	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C480	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C481	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C482	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C483	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C484	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C485	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C486	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C487	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C488	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C489,90	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C491	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C492	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C493	ECUX1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C510	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C511	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C512,13	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C514	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C515	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C516	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C517-19	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C520	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C521	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C522,23	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	2	
C524	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C525	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C526	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C527,28	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C529	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C530-32	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C533	ECEV1AV330Q	E.CAPACITOR CH 10V 33U	1	
C534	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C535	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C536	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C537	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C538	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C539	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C600,01	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C602	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C751	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
D1,D2	MA157	DIODE	2	
D3,D4	MA8075-H	DIODE	2	
D30,31	MA8030	DIODE	2	
D32	MA8047-H	DIODE	1	
D33-36	MA152K	DIODE	4	
D80-83	MA157	DIODE	4	
D120-23	MA157	DIODE	4	
D160-63	MA157	DIODE	4	
D200,01	MA152K	DIODE	2	
D202	MA8047-H	DIODE	1	
D203	MA152K	DIODE	1	
D204,05	MA8047-H	DIODE	2	
D206-09	MA152K	DIODE	4	
D300-02	LN1251CAL	DIODE	3	
D320,21	MA157	DIODE	2	
D340	MA728	DIODE	1	
D341	MA736	DIODE	1	
D342	MA728	DIODE	1	
D343	MA736	DIODE	1	
D344	MA8039-L	DIODE	1	
D380	MA728	DIODE	1	
D381	MA736	DIODE	1	
D382	MA728	DIODE	1	
D383	MA736	DIODE	1	
D400-05	MA738	DIODE	6	
D406,07	MA8047-H	DIODE	2	
D408-13	MA738	DIODE	6	
D450	MA152K	DIODE	1	
D451-56	MA738	DIODE	6	
D457	MA152K	DIODE	1	
D458-63	MA738	DIODE	6	
D510-13	MA701A	DIODE	4	
D514-19	MA704A	DIODE	6	
FL320,21	VLF1016A470	FILTER	2	
FL510-15	VLF0576	FILTER	6	
IC1	TC7WU04F	IC	1	
IC2	UPC4082G2	IC	1	
IC3	TC4052BF	IC	1	
IC30	UPC4082G2	IC	1	
IC31	NJM4580ED	IC	1	
IC32	AD633JR	IC	1	
IC33	UPC4082G2	IC	1	
IC34	MC74HC74AF	IC	1	
IC35	TC7W00F	IC	1	
IC60,61	MC74HC08AF	IC	2	
IC63-66	MC74HC74AF	IC	4	
IC67	MC74HC157AF	IC	1	
IC68	T74HC191AF	IC	1	
IC69	MC74HC32AF	IC	1	
IC70	MC74HC86AF	IC	1	
IC71	MC74HC04AF	IC	1	
IC72	MC74HC74AF	IC	1	
IC73	MC74HC11F	IC	1	
IC74	MC74HC27F	IC	1	
IC80,81	UPC4741G2	IC	2	
IC82	NJM2901M	IC	1	
IC83	MC74HC4050F	IC	1	
IC120,21	UPC4741G2	IC	2	
IC160	NJM2901M	IC	1	
IC161,62	UPC4741G2	IC	2	
IC200	ADG408BR	IC	1	
IC201	AD7896AR	IC	1	
IC202	AD7943BR	IC	1	
IC203	SMP08FS	IC	1	
IC204	MC74HC244AF	IC	1	
IC205	UPC4082G2	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC207	UPC4082G2	IC	1	
IC230	MC68332CFC25	IC	1	
IC231	TL7705CPSB	IC	1	
IC235	VSI2965	IC	1	FOR VEP82220A
IC235	VSI2964	IC	1	FOR VEP82220B
IC236,37	74AC74SJ	IC	2	
IC238	TC7WU04F	IC	1	
IC240	74AC08SJ	IC	1	
IC241	MC74HC244AF	IC	1	
IC260,61	Y7C18525SC	IC	2	
IC262	IDT71321A55	IC	1	
IC263,64	SN74S1051NS	IC	2	
IC265	MC74HC175F	IC	1	
IC266	MC74HC164AF	IC	1	
IC267	MC74HC273AF	IC	1	
IC268	MC74HC74AF	IC	1	
IC269	MC74HC86AF	IC	1	
IC280	MC74HCT244AF	IC	1	
IC282	SLA909SF1G	IC	1	
IC300	TE7751	IC	1	
IC301,02	MC74HC244AF	IC	2	
IC303	T74VHCT244F	IC	1	
IC304,05	MC74HC244AF	IC	2	
IC320	SC371025AVFU	IC	1	
IC321	MC14053BF	IC	1	
IC322	MC74HC574AF	IC	1	
IC323	TC7WU04F	IC	1	
IC324	T74VHCU04F	IC	1	
IC325	74AC74SJ	IC	1	
IC326	MC74HC74AF	IC	1	
IC340	TL1451CNS	IC	1	
IC341	UPC393G2	IC	1	
IC342	NJM4580ED	IC	1	
IC400,01	AN3890FBS	IC	2	
IC402	NJM4580ED	IC	1	
IC403	NJM2903M	IC	1	
IC404	NJM4580ED	IC	1	
IC450,51	AN3834K	IC	2	
IC452	UPC4558G2	IC	1	
IC510,11	NJM78L09UA	IC	2	
IC512,13	NJM79L09UA	IC	2	
IC514	XC62AP5002P	IC	1	
IC515,16	XC62AP3002P	IC	2	
IC517	NJM79L05UA	IC	1	
IC600	NJM2903M	IC	1	
IC717	TCVHC32F	IC	1	
IS235	VJS2336A040	CONNECTOR (FEMALE) 5P	1	
L230,31	VLQ0576	COIL	2	
L340	VLQ0504331K	COIL	1	
L341	VLQ0407120M	COIL 12UH	1	
L342	VLQ0504331K	COIL	1	
L380	VLQ0407120M	COIL 12UH	1	
L381,82	VLQ0504331K	COIL	2	
L510	VLP0133	COIL	1	
P1,P2	VJP3454B096	CONNECTOR (MALE)	2	
Q1	2SD601A-R	TRANSISTOR	1	
Q2,Q3	2SB709A-R	TRANSISTOR	2	
Q4	2SD601A-R	TRANSISTOR	1	
Q5	2SB709A-R	TRANSISTOR	1	
Q6	2SD601A-R	TRANSISTOR	1	
Q340,41	2SB1174-Q	TRANSISTOR	2	
Q380,81	2SB1174-Q	TRANSISTOR	2	
Q400	PU3210	TRANSISTOR	1	
Q401	PU3110	TRANSISTOR	1	
Q402	PU3210	TRANSISTOR	1	
Q403	PU3110	TRANSISTOR	1	
Q510,11	2SD601A-R	TRANSISTOR	2	
QR1	UN2213	TRANSISTOR-RESISTOR	1	
QR2	UN2113	TRANSISTOR-RESISTOR	1	
QR3	UN2215	TRANSISTOR-RESISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR4	UN2115	TRANSISTOR-RESISTOR	1	
QR5,R6	UN2213	TRANSISTOR-RESISTOR	2	
QR7,R8	UN2113	TRANSISTOR-RESISTOR	2	
QR30	UN2213	TRANSISTOR-RESISTOR	1	
QR81,82	UN2213	TRANSISTOR-RESISTOR	2	
QR83	UN2113	TRANSISTOR-RESISTOR	1	
QR84	UN2213	TRANSISTOR-RESISTOR	1	
QR85	UN2113	TRANSISTOR-RESISTOR	1	
QR120	UN2213	TRANSISTOR-RESISTOR	1	
QR121	UN2113	TRANSISTOR-RESISTOR	1	
QR122	UN2213	TRANSISTOR-RESISTOR	1	
QR123	UN2113	TRANSISTOR-RESISTOR	1	
QR124	UN2213	TRANSISTOR-RESISTOR	1	
QR160	UN2213	TRANSISTOR-RESISTOR	1	
QR161	UN2113	TRANSISTOR-RESISTOR	1	
QR162	UN2213	TRANSISTOR-RESISTOR	1	
QR163	UN2113	TRANSISTOR-RESISTOR	1	
QR164	UN2213	TRANSISTOR-RESISTOR	1	
QR340,41	UN2111	TRANSISTOR-RESISTOR	2	
QR400	UN2213	TRANSISTOR-RESISTOR	1	
QR401	UN2113	TRANSISTOR-RESISTOR	1	
QR600	UN2217	TRANSISTOR-RESISTOR	1	
QR601	UN2211	TRANSISTOR-RESISTOR	1	
R1-R3	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R4	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R5	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R7	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R8	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R9,10	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R11	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R12,13	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R14	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R15	ERJ6GEYG823	M.RESISTOR CH 1/10W 82K	1	
R16	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R17	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R18	ERJ6GEYG823	M.RESISTOR CH 1/10W 82K	1	
R19,20	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R21	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R25-29	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	5	
R31	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R32	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R33	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R34	ERJ6RBD563	M.RESISTOR CH 1/10W 56K	1	
R35	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R36	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R37	ERJ6RBD823	M.RESISTOR CH 1/10W 82K	1	
R38,39	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	2	
R40	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R41	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R42	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R43-45	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R46	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R48	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R49	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R50	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R51	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R52	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R53	ERJ6RBD823	M.RESISTOR CH 1/10W 82K	1	
R54	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R55	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R56-59	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R60	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R61-77	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	17	
R80,81	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R82,83	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	2	
R84	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R85	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R86	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R87,88	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R89,90	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	2	
R91,92	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	2	
R93	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R94	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R95	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R96	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R97	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R98,99	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R100,01	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R102,03	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	2	
R104	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R105	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R106	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R107	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R108	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R109	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R120,21	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R122,23	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	2	
R124	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R125	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R126	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R127	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R128,29	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R130,31	ERJ6RED224	M.RESISTOR CH 1/10W 220K	2	
R132,33	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	2	
R134	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R135	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R136	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R137	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R138	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R139,40	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R141,42	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R143,44	ERJ6RED224	M.RESISTOR CH 1/10W 220K	2	
R145	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R146	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R147	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R148	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R149	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R160,61	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R162,63	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	2	
R164	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R165	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R166	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R167	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R168,69	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R170,71	ERJ6RED224	M.RESISTOR CH 1/10W 220K	2	
R172	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R173	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R174	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R175	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R176	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R177,78	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	2	
R179,80	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R181,82	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R183,84	ERJ6RED224	M.RESISTOR CH 1/10W 220K	2	
R185	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R186	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R187	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R188	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R189	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R200	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R201,02	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R203	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R204	ERJ6RBD303	M.RESISTOR CH 1/10W 30K	1	
R205	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R206	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R207	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R208	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R209	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R210	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R211	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R212,13	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R214	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R215,16	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R217,18	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R219	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R220-22	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R223	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R232	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R234	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R235-43	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	9	
R244	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R245	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R246	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R247	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R248-51	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	4	
R252	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R253	ERJ6GEYJ301	M.RESISTOR CH 1/10W 300	1	
R254	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R255	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R257	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R259,60	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R261	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R262	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R263,64	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R265	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R266	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R267-69	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R270,71	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R275-78	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R280	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R281,82	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R283-85	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R286,87	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R300	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R301	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R303,04	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R305-13	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	9	
R314-16	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	3	
R318,19	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R320	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R321	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R322-24	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
R325	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R326	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R327-29	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	3	
R330	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R331	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R332	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R333	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R334	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R336,37	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R338,39	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R340	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R341	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R342	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R343	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R344	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R345	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R346	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R347	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R348	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R349	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R350	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R351-53	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R354	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R355	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R356	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R357	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R358	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R359	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R360	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R361	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R362,63	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R364	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R365	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R366	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R367	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R368	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R369	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R370	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R371	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R372	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R373	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R374,75	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R380	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R381	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R382	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R383	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R384	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R385	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R400,01	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R402	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R403	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R404,05	ERJ12YJR68	M.RESISTOR CH 1/2W 0.68	2	
R406,07	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	2	
R408	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R409	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R410	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R411	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R412	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R413	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R414,15	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R416	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R417	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R418	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R419	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R420	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R421	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R422	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R423	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R424,25	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R426	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R427	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R428,29	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R430,31	ERJ12YJR68	M.RESISTOR CH 1/2W 0.68	2	
R432,33	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R436,37	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R450	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R451	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R452	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R453-55	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	3	
R456,57	ERJ12YJ2R2	M.RESISTOR CH 1/2W 2.2	2	
R458	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1	
R459	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R460	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R461	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R462	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R463	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R464,65	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R466,67	ERJ12YJ2R2	M.RESISTOR CH 1/2W 2.2	2	
R468	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1	
R469	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R470	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R471	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R510	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R511,12	ERJ6RBD391	M.RESISTOR CH 1/10W 390	2	
R513	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R514-17	ERJ6RBD391	M.RESISTOR CH 1/10W 390	4	
R550-59	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	10	
R600-02	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R603-06	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
R607	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R609	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R621	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R622-27	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	6	
R628	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R629,30	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R631,32	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R640	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R650,51	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R652	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R653	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R654	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R655	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R656	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R736	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R751	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R762	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R765,66	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R769	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R777	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
TG510,11	VJR0646	TEST POINT	2	
TP1	VJR0646	TEST POINT	1	
TP2	EYF6CU	TEST POINT	1	
TP30,31	VJR0646	TEST POINT	2	
TP32,33	EYF6CU	TEST POINT	2	
TP34,35	VJR0646	TEST POINT	2	
TP60	VJR0646	TEST POINT	1	
TP80-83	VJR0646	TEST POINT	4	
TP120-23	VJR0646	TEST POINT	4	
TP160-63	VJR0646	TEST POINT	4	
TP200	EYF6CU	TEST POINT	1	
TP201	VJR0646	TEST POINT	1	
TP202	EYF6CU	TEST POINT	1	
TP230-34	VJR0646	TEST POINT	5	
TP280	VJR0646	TEST POINT	1	
TP300-02	VJR0646	TEST POINT	3	
TP320,21	VJR0646	TEST POINT	2	
TP400,01	VJR0646	TEST POINT	2	
TP450,51	VJR0646	TEST POINT	2	
X230	VSX0918	CRYSTAL OSCILLATOR	1	
X320	VSX0645	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■E3	VEP86267A	F2 SYSCON P.C.BOARD	1	(RTL)FOR AJ-D850P
■E3	VEP86267B	F2 SYSCON P.C.BOARD	1	(RTL)FOR AJ-D850E
C1	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C9	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C10,11	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	2	
C12	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C13	ECQB1H104JF	P.CAPACITOR 50V 0.1U	1	
C14	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C15	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C16-26	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	11	
C27-29	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C30	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C32-34	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C35	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C36,37	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C38	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C46	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C47	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C49	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C51	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C53	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C55	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C56-58	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C59,60	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C65	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C66	ECA1CHG682	E.CAPACITOR 16V 6800U	1	
C67	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C68,69	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C70,71	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C72	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C73	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C74	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C76	ECA1CHG682	E.CAPACITOR 16V 6800U	1	
C77,78	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C79	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C81	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C83	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C86,87	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C88-90	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C91	ECUX1E105KBP	C.CAPACITOR CH 25V 1U	1	
C92	ECUX1C106KBP	C.CAPACITOR CH 16V 10U	1	
C93	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C94-96	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	3	
C97	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C98	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C99	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C100	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C101	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C500,01	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	2	
C502	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C503-06	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C508-13	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	6	
C514-19	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C520-22	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C523	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C524	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C525	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C526,27	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C528-35	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	8	
C536	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C537,38	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C543-45	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C547	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C548	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C549,50	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C551,52	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C703-13	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	11	
C714	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C715,16	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	2	
C717-21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C722,23	ECUM1H050CCN	C.CAPACITOR CH 50V 5P	2	
C724,25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C726	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C727	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C728	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C729	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C730	ECUX1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C731	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C732	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C733,34	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	2	
C735	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C736	ECA1CAXN330	E.CAPACITOR 16V 33U	1	
C737	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C738	ECA1CAXN330	E.CAPACITOR 16V 33U	1	
C739,40	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C741	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C742	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C743	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C744,45	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	2	
C746	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C747-61	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	15	
C762	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C763	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C764	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C765	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C766	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C767	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C768	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C769	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C770	ECUX1H561JCN	C.CAPACITOR CH 50V 560P	1	
C771	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C772,73	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C774	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C775	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C776	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C777-80	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C781,82	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C783	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C784	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C785	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C800-03	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C804-09	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C900,01	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C902,03	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C904-07	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	4	
D1	MA157	DIODE	1	
D2-D5	MA715	DIODE	4	
D8	MA152WK	DIODE	1	
D9	MA3068-H	DIODE	1	
D10	MA3051-H	DIODE	1	
D11	MA3047-M	DIODE	1	
D12	MA3100-M	DIODE	1	
D13	MA3051-H	DIODE	1	
D14	MA3075-M	DIODE	1	
D15	21DQ04	DIODE	1	
D16	MA3051-H	DIODE	1	
D17	MA157	DIODE	1	
D18-22	MA152WK	DIODE	5	
D25-27	MA152WK	DIODE	3	
D28-43	MA738	DIODE	16	
D44	MA152WK	DIODE	1	
D45-48	NSQ03A04	DIODE	4	
D49,50	SN74S1051NS	IC	2	
D51	MA3062-L	DIODE	1	
D52	MA3082M	DIODE	1	
D53	MA3030-H	DIODE	1	
D54	MA738	DIODE	1	
D55	MA152WK	DIODE	1	
D500	MA152WK	DIODE	1	
D503	MA152WK	DIODE	1	
D504,05	MA715	DIODE	2	
D506	MA152WK	DIODE	1	
D507	MA715	DIODE	1	
D701-06	MA715	DIODE	6	
D709	MA715	DIODE	1	
D711-14	MA157	DIODE	4	
D715	MA152WK	DIODE	1	
D716-19	MA715	DIODE	4	
D720-22	SN74S1051NS	IC	3	
D723,24	MA715	DIODE	2	
FL701,02	VLF0576	FILTER	2	
FL900-03	VLF0576	FILTER	4	
IC1	M37702S4AFP	IC	1	
IC2	VSI2673A	IC	1	FOR VEP86267A
IC2	VSI2676	IC	1	FOR VEP86267B
IC3	74F573SJ	IC	1	
IC4	74F138SJ	IC	1	
IC5	74F573SJ	IC	1	
IC6	TL7705CPSB	IC	1	
IC7	MC74HC132AF	IC	1	
IC8	MC74HC04AF	IC	1	
IC9,10	74AC32SJ	IC	2	
IC11,12	74F32SJ	IC	2	
IC13	MC74HC74AF	IC	1	
IC14	74F11SJ	IC	1	
IC15	IDT71321A55	IC	1	
IC16	74F245SJ	IC	1	
IC17	STK14C88N45	IC	1	
IC19,20	74F541SJ	IC	2	
IC23	74F245SJ	IC	1	
IC24	UPD6456T611Y	IC	1	
IC26	TE7751	IC	1	
IC27,28	M54649L	IC	2	
IC29	NJM2901M	IC	1	
IC30	NJM2904M	IC	1	
IC31,32	MC14538BF	IC	2	
IC33	74F32SJ	IC	1	
IC34	74F00SJ	IC	1	
IC35	NJM2901M	IC	1	
IC36,37	TC7S14F	IC	2	
IC38	MC14538BF	IC	1	
IC39	NJM2904M	IC	1	
IC500	HD64180ZRP10	IC	1	
IC501,02	MC74HC541AF	IC	2	
IC503	VSI2674A	IC	1	FOR VEP86267A
IC504	K6256DLG7L	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC503	VSI2677	IC	1	FOR VEP86267B
IC505	IDT71321A55	IC	1	
IC506	MC74HC138AF	IC	1	
IC507	74F32SJ	IC	1	
IC508	MC74HC00AF	IC	1	
IC509	T74HC191AF	IC	1	
IC510	Z84C4310FEC	IC	1	
IC511,12	MC74HC126AF	IC	2	
IC513,14	SN75C1168NS	IC	2	
IC515	MC1488M	IC	1	
IC516	MC1489AM	IC	1	
IC517	MC14024BF	IC	1	
IC518	TE7751	IC	1	
IC519,20	MC14021BF	IC	2	
IC521,22	MC14094BF	IC	2	
IC523	MC74HC04AF	IC	1	
IC524	MC14050BF	IC	1	
IC525	SN74LS38NS	IC	1	
IC527	TE7751	IC	1	
IC528,29	MC14021BF	IC	2	
IC530,31	T74HC191AF	IC	2	
IC532	MC74HC574AF	IC	1	
IC701	M37702S4AFP	IC	1	
IC702	VSI2675	IC	1	FOR VEP86267A
IC702	VSI2678	IC	1	FOR VEP86267B
IC703	K6256DLG7L	IC	1	
IC704	74F573SJ	IC	1	
IC705,06	74F138SJ	IC	2	
IC707,08	74F32SJ	IC	2	
IC709	74F00SJ	IC	1	
IC710	MN51040VPI	IC	1	
IC711	MC74HC574AF	IC	1	
IC712	74AC32SJ	IC	1	
IC713	74F32SJ	IC	1	
IC714,15	74F541SJ	IC	2	
IC716	74F245SJ	IC	1	
IC717	74F541SJ	IC	1	
IC718	MC14053BF	IC	1	
IC719	NJM4560MD	IC	1	
IC720	NJM2068MD	IC	1	
IC721	UPC319G2	IC	1	
IC722	UPC4741G2	IC	1	
IC723	NJM78L09UA	IC	1	
IC724	NJM79L09UA	IC	1	
IC725,26	NJM084M	IC	2	
IC728,29	74F74SJ	IC	2	
IC730	74F32SJ	IC	1	
IC731	74F245SJ	IC	1	
IC732	74F08SJ	IC	1	
IC733	NJM084M	IC	1	
IC734	74F32SJ	IC	1	
IS2	VJS2336A032	CONNECTOR (FEMALE)	1	
IS503	VJS2336A032	CONNECTOR (FEMALE)	1	
IS702	VJS2336A032	CONNECTOR (FEMALE)	1	
L1	VLQ0163J270	COIL 27UH	1	
L2	VLQ0319K470	COIL 47UH	1	
L500-03	VLQ0576	COIL	4	
L701	VLQ0163J470	COIL 47UH	1	
L900-03	VLP0133	COIL	4	
LED1-D4	LN1251CAL	DIODE	4	
P1,P2	VJP3454B096	CONNECTOR (MALE)	2	
Q3	2SB710A-R	TRANSISTOR	1	
Q4	2SB936A-Q	TRANSISTOR	1	
Q5,Q6	2SD601A-R	TRANSISTOR	2	
Q7,Q8	2SB1073-R	TRANSISTOR	2	
Q9	2SD601A-R	TRANSISTOR	1	
Q10	2SB709A-R	TRANSISTOR	1	
Q11,12	2SD1119-R	TRANSISTOR	2	
Q13	2SB709A-R	TRANSISTOR	1	
Q14	2SD601A-R	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q15,16	2SB1073-R	TRANSISTOR	2	
Q17	2SD601A-R	TRANSISTOR	1	
Q18	2SB709A-R	TRANSISTOR	1	
Q19,20	2SD1119-R	TRANSISTOR	2	
Q21	2SB709A-R	TRANSISTOR	1	
Q22	2SD601A-R	TRANSISTOR	1	
Q23,24	2SB1175	TRANSISTOR	2	
Q25	2SD601A-R	TRANSISTOR	1	
Q26	2SB709A-R	TRANSISTOR	1	
Q27,28	2SD1747PQY	TRANSISTOR	2	
Q29	2SB709A-R	TRANSISTOR	1	
Q30	2SD601A-R	TRANSISTOR	1	
Q31,32	2SB1073-R	TRANSISTOR	2	
Q33	2SD601A-R	TRANSISTOR	1	
Q34	2SB709A-R	TRANSISTOR	1	
Q35,36	2SD1119-R	TRANSISTOR	2	
Q37	2SB709A-R	TRANSISTOR	1	
Q38	2SD601A-R	TRANSISTOR	1	
Q39	2SB936A-Q	TRANSISTOR	1	
Q701-03	2SD601A-R	TRANSISTOR	3	
Q704,05	2SB709A-R	TRANSISTOR	2	
QR3-10	UN2213	TRANSISTOR-RESISTOR	8	
QR11-16	UN2214	TRANSISTOR-RESISTOR	6	
QR17	UN2213	TRANSISTOR-RESISTOR	1	
QR18-26	UN2214	TRANSISTOR-RESISTOR	9	
QR27,28	UN2113	TRANSISTOR-RESISTOR	2	
QR29,30	UN2214	TRANSISTOR-RESISTOR	2	
QR31,32	UN2113	TRANSISTOR-RESISTOR	2	
QR33,34	UN2214	TRANSISTOR-RESISTOR	2	
QR35,36	UN2113	TRANSISTOR-RESISTOR	2	
QR37,38	UN2213	TRANSISTOR-RESISTOR	2	
QR39,40	UN2113	TRANSISTOR-RESISTOR	2	
QR41	UN2213	TRANSISTOR-RESISTOR	1	
QR43	UN2213	TRANSISTOR-RESISTOR	1	
QR44	UN2214	TRANSISTOR-RESISTOR	1	
QR701-03	UN221L	TRANSITOR-RESISTOR	3	
QR704,05	UN2214	TRANSISTOR-RESISTOR	2	
R1-R5	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R6-10	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R11,12	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	2	
R13,14	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R16	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R17	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R18,19	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R20	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R21,22	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R23,24	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R25,26	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R27,28	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R29	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R33-35	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R38,39	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R43	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R44	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R45	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R46	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R47	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R48	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R49	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R54,55	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R56	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R57	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R58-61	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	4	
R62	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R63-70	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	8	
R71,72	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R73,74	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R75	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R76,77	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R82	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R83	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R84-87	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	4	
R88	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	FOR VEP86267A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R89	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	FOR VEP86267B
R90-95	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	6	
R96	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R97	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R100	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R101,02	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R103,04	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R105	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R106	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R108	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R109,10	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R111,12	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R113	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R114	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R116	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R117,18	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R119,20	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R121	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R122	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R124	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R125,26	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R127,28	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R129-37	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	9	
R138,39	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R141,42	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R145-47	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R150	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R152	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R153	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R154	ERX1SJ1R0	M.RESISTOR 1W 1.0	1	
R155	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R156	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R157	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R158	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R159	ERG1SJ220	M.RESISTOR 1W 22	1	
R160	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R161	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R162,63	ERJ8GCYG151	M.RESISTOR CH 1/8W 150	2	
R164,65	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2	
R166	ERJ8GCYG152	M.RESISTOR CH 1/8W 1.5K	1	
R167-69	ERJ8GCYG681	M.RESISTOR CH 1/8W 680	3	
R170	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R171	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R172,73	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R174-81	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R182	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R184	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R185	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R186	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R187-90	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	4	
R191	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R192	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R193,94	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R195	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R196,97	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R198	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R199,00	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R201	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R202	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R203,04	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R205	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R206	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R207,08	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R209	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R210,11	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R212	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R213,14	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R215	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R216,17	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R218	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R219,20	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R221	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R222	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R223,24	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R225	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R226	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R227,28	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R229	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R230,31	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R232	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R233,34	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R235	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R236,37	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R238	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R239,40	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R241	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R242	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R243,44	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R245	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R246	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R247,48	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R249	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R250,51	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R252	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R253,54	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R255	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R256,57	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R258	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R259,60	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	2	
R261	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R262	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R263	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R266-69	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R271	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R273	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R275	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R277	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R284,85	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R288	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R290	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R291	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R292,93	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R294	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R295	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R296	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R297	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R298	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R299	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R304-15	ERJ8GCYJ391	M.RESISTOR CH 1/8W 390	12	
R316,17	ERG1SJ100	M.RESISTOR 1W 10	2	
R318	ERX1SJ6R2	M.RESISTOR 1W 6.2	1	
R319	ERG1SJ100	M.RESISTOR 1W 10	1	
R320	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R321-28	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	8	
R329,30	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R332	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R333	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R334	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R337-39	ERJ8GCYG681	M.RESISTOR CH 1/8W 680	3	
R341	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R342	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R345	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R346	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R347	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R348	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R349-62	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	14	
R363	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R364	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R365	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R366	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R367	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R368-70	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R371	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R372	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R375,76	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R377-79	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	3	
R380	ERJ8GCYG152	M.RESISTOR CH 1/8W 1.5K	1	
R382,83	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R384	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R500	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R501	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R502,03	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R504-11	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R512	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R513-15	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R516,17	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R518,19	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R520	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R521	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R523,24	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R525	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R527	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R528-31	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
R532,33	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R534	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R535,36	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R537	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R542	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R543	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R544	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R545	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R546	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R547-49	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R550,51	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R554-58	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R580	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R585	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R590-94	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R598	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R599	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R606,07	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R608	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R609	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R610-13	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R629	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R634	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R636	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R638,39	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R641,42	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R643,44	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R646,47	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R648,49	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R700	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R701	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R702	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R705-10	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	6	
R711-16	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	6	
R717	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R718	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R719,20	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R721,22	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R723-26	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R727	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R728-31	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
R732-34	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R735	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R736	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R737	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R738	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R739,40	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R741,42	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R743,44	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R745,46	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R747	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R748	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R749,50	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R751	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R752,53	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R754	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R755	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R756-59	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	4	
R760	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	FOR VEP86267A
R762	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R764,65	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R766	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R767-69	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R770	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R771	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R772	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R773	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R774	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R775,76	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R777	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R778-81	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	4	
R782	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R783	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R784	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R785	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R786	ERJ6RED820	M.RESISTOR CH 1/10W 82	1	
R787	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R788	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R789	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R790	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R791	ERJ6RBD683	M.RESISTOR CH 1/10W 68K	1	
R792	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R793	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R794,95	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R796	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R797,98	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	2	
R799	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R800,01	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R802	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R803,04	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	2	
R805-08	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	4	
R809	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R810	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R811,12	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R813	ERJ6GEYG824	M.RESISTOR CH 1/10W 820K	1	
R814	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R815	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R816-39	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	24	
R840-47	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R849	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R853-56	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R857	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R858,59	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R860-62	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R865	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R866	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R867	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R868	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R869	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R870	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R871,72	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R873	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R874,75	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R876	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R877,78	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R879,80	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R881	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R882,83	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R884	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R885	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R886	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R887,88	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	2	
R890	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R891	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R893	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R894	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R896,97	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R899-04	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	6	
R906	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R908	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R912	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R914	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R916	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R918	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R920	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R922	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R924	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R951	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R955	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R957	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R958	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R960	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R961-68	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R977	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R980-82	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R983	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R984	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R986,87	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R988	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R989	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R991,92	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R993	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R994	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R996,97	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R998	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R999	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R1001,02	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R1003	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R1005,06	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R1010,11	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R1013-17	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	5	
R1019-22	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
SW501	VSS0367-08B	SWITCH	1	
TG1	EYF6CU	TEST POINT	1	
TG701	EYF6CU	TEST POINT	1	
TP8	EYF6CU	TEST POINT	1	
TP13,14	EYF6CU	TEST POINT	2	
VC1	VCV0049	TRIMMER	1	
X1	VSX0641	CRYSTAL OSCILLATOR	1	
X500	VSX0641	CRYSTAL OSCILLATOR	1	
X701	VSX0654	CRYSTAL OSCILLATOR	1	
X702	VSX1001	CRYSTAL OSCILLATOR	1	
X703	VSX0958	CRYSTAL OSCILLATOR	1	FOR VEP86267A
X703	VSX0957	CRYSTAL OSCILLATOR	1	FOR VEP86267B
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■E4	VEP83410C	F4 VIDEO OUT P.C.BOARD	1	(RTL)
C3001	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3002	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3003	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3004	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3010	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3011,12	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	2	
C3013	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3014,15	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3016	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3017,18	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3019	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3020,21	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	2	
C3022	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3023	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3024,25	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3026	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3027,28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3029	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3030,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3032	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3033,34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3035	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3036,37	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3038	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3039,40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3041	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3042	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3050-57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C3058	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3070-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3075	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3076	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	1	
C3077	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3078	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3079,80	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3081	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3082	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C3083	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3084	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3085,86	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C3087	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3088,89	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3091,92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3100-04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3105-07	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	3	
C3108	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3109	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3110	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3111	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3112,13	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	2	
C3114	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3117-19	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3160-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C3166,67	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C3168,69	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	2	
C3170,71	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3172,73	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3174	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3175,76	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3177	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3178	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3179-82	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C3183,84	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3200-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3207	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3208	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3257	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3260-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C3266,67	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3268	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3269	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3270	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3280-83	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3284,85	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3286	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3287,88	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3289	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3290	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3291	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3292	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3300-04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3330,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3340-43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3350-53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3370-83	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	14	
C3430	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3432-40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C3442,43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3445,46	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3452	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C3455	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3457	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3460	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3464	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3465	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3466	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3467,68	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3469	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3470	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3471	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3472-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3475	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3476-83	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C3484	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3485	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3486	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3487	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3500-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	12	
C3551-57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C3576-79	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3580,81	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C3582	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C3583-86	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3588-92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3600	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C3601	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3602	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3603	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3604	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3605	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3606	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C3607,08	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3609	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3610,11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3612	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3613,14	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3615	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3616,17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3618	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3619,20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3621	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3622,23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3624	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3625,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3627	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3628	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3650	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3651	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3652	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3653	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3654,55	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3656	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3657	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3658	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3659	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3660	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3661,62	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3663	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C3664	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3665	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3666	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3700	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3701	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3702	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3703	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3704	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3705	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3706,07	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3708-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3711	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3712	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3713	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3714	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3717-20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3721	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3725	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3726	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3727,28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3729	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3730	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3731	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3732	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3733,34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3735,36	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C3739,40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3745	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3746	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3747,48	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3749	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3750	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3751	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3752,53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3754,55	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C3756-58	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	3	
C3759	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3760	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3761-64	ECEA1CGE221	E.CAPACITOR 16V 220U	4	
C3800	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3801,02	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3803	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3804	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3805	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3810	ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C3811	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3812,13	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3814,15	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3817	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3818,19	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3820,21	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3824	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3825,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3827,28	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3829	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3830	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3831	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3832,33	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3834	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3835,36	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3837	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3838	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3839	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3840	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3841-43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3844	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3845,46	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3847	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3848,49	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3850,51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3857-60	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3861	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3862	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3864,65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3866	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3867	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3868	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3869	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3870	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3871	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3873	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3875	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3876	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3877	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3878	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3879	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3880	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3881	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3882	ECUX1H070DCV	C.CAPACITOR CH 50V 7P	1	
C3883	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3885	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3890	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3893-95	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3900	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3901	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3902	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3903	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3904	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3905	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3906	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3907	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3910,11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3914	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3915	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3918-20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3921,22	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3924	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3925,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3927	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3928	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3929,30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3931	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3932	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3933,34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3935	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3936	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3937,38	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C3939	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3940	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3941	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3942	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3943	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3944	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3945	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3946	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3950	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3951	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3952,53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3954	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3955	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3956	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3957,58	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3959	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3960,61	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3962	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3963-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3966	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3990	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3991	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3992	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3993	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3994,95	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3996	ECUX1H070DCV	C.CAPACITOR CH 50V 7P	1	
C3997	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
D3070	MA335	DIODE	1	
D3160	M1MA152K	DIODE	1	
D3260	M1MA152K	DIODE	1	
D3550-52	MA701A	DIODE	3	
D3650	MA152WK	DIODE	1	
D3651	MA717	DIODE	1	
D3800,01	MA335	DIODE	2	
D3810,11	M1MA152K	DIODE	2	
D3950	M1MA152K	DIODE	1	
D3960,61	M1MA152K	DIODE	2	
FL3010-13	VLF1016A223	FILTER	4	
FL3700	VLF1294	FILTER	1	
FL3701,02	VLF1295	FILTER	2	
FL3900	VLF1016A223	FILTER	1	
FL3901	VLF1462	FILTER	1	
IC3010	NJM78L09UA	IC	1	
IC3011	NJM78L05UA	IC	1	
IC3012	NJM79L05UA	IC	1	
IC3013	NJM78L09UA	IC	1	
IC3014	NJM78L05UA	IC	1	
IC3015	NJM79L05UA	IC	1	
IC3016	NJM79L09UA	IC	1	
IC3050	SLA7220F5A	IC	1	
IC3051	EPM7128STC15	IC	1	BLANK ROM
ID3051	VVVSI3141		1	SOFTWARE
IC3070	MC74HC125AF	IC	1	
IC3071	NE521D	IC	1	
IC3072	MC74HC4053F	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3073	NJM084M	IC	1	
IC3074	MC74HC4053F	IC	1	
IC3100	UPD65650J203	IC	1	
IC3101-03	SN74LS221NS	IC	3	
IC3104,05	SN74LS04NS	IC	2	
IC3106	MC74HC00AF	IC	1	
IC3109	D485505G25	IC	1	
IC3111	MC74HC574AF	IC	1	
IC3112	UPD42280G3	IC	1	
IC3160	MC74HC74AF	IC	1	
IC3161	74F112SJ	IC	1	
IC3162	MC74HC86AF	IC	1	
IC3163	MC74HC02AF	IC	1	
IC3164	SN74LS123NS	IC	1	
IC3165	SN74LS221NS	IC	1	
IC3166	SN74LS05NS	IC	1	
IC3167-69	MC74HC574AF	IC	3	
IC3170	SN74AS244AN	IC	1	
IC3171	NJM084M	IC	1	
IC3172	DAC10GS	IC	1	
IC3200	UPD65650J203	IC	1	
IC3202	SN74LS221NS	IC	1	
IC3250	MC74HC125AF	IC	1	
IC3260	NJM082BM	IC	1	
IC3261	74F08SJ	IC	1	
IC3262	SN74AS74ANS	IC	1	
IC3263	74F574SJ	IC	1	
IC3264,65	SN74AS244AN	IC	2	
IC3280-82	MC74HC574AF	IC	3	
IC3283	DAC10GS	IC	1	
IC3284	NJM082BM	IC	1	
IC3300,01	THCT574AF	IC	2	
IC3302	T74HCT541AF	IC	1	
IC3303,04	THCT574AF	IC	2	
IC3330,31	SN74AS244AN	IC	2	
IC3340	EPM7128STC15	IC	1	BLANK ROM
ID3340	VVVSI3141		1	SOFTWARE
IC3350	MB87D132	IC	1	
IC3370	L7A1519	IC	1	
IC3371	EPM7128STC15	IC	1	BLANK ROM
ID3371	VVVSI3141		1	SOFTWARE
IC3372-74	D485505G25	IC	3	
IC3430	74ALS541SJ	IC	1	
IC3432-34	MC10H124M	IC	3	
IC3435	74ALS541SJ	IC	1	
IC3436	MC10H124M	IC	1	
IC3437,38	74F244SJ	IC	2	
IC3439,40	D485505G25	IC	2	
IC3500,01	SN74S1051NS	IC	2	
IC3502	74F541SJ	IC	1	
IC3503	74F245SJ	IC	1	
IC3504,05	74F541SJ	IC	2	
IC3506,07	UPD71055GB	IC	2	
IC3508,09	THCT574AF	IC	2	
IC3510,11	SN74S1051NS	IC	2	
IC3550,51	D485505G25	IC	2	
IC3552	CG46183-104	IC	1	
IC3581-84	D485505G25	IC	4	
IC3585,86	THCT574AF	IC	2	
IC3587	EPM7128STC15	IC	1	BLANK ROM
ID3587	VVVSI3141		1	SOFTWARE
IC3588,89	TLCX244FT	IC	2	
IC3591-93	TVHT244FT	IC	3	
IC3595	TVHT244FT	IC	1	
IC3596	XC62AP3002P	IC	1	
IC3600	AN78N09	IC	1	
IC3601	AN78N05	IC	1	
IC3602	AN79N09	IC	1	
IC3603	AN78N09	IC	1	
IC3604	NJM78L05UA	IC	1	
IC3605	NJM79L05UA	IC	1	
IC3606	AN79N09	IC	1	
IC3650	AN91A12S	IC	1	
IC3651	NE521D	IC	1	
IC3700	ADV7123KST50	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3702-04	LT1228CS8	IC	3	
IC3801	DAC10GS	IC	1	
IC3802	NJM082BM	IC	1	
IC3804	MC74HC4053F	IC	1	
IC3805	M51272FP	IC	1	
IC3900	LT1228CS8	IC	1	
IC3901	NJM2534V	IC	1	
IC3902	DAC10GS	IC	1	
IC3903	NJM082BM	IC	1	
IC3904	AD828AR	IC	1	
IC3990	NJM2534V	IC	1	
IC3996	LT1228CS8	IC	1	
IC3997	CXD1175AM	IC	1	
IC3998	NJM78L05UA	IC	1	
L3001-07	VLP0133	COIL	7	
L3071	VLQ0163J221	COIL 220UH	1	
L3550	VLP0133	COIL	1	
L3650	VLQ0163J680	COIL 68UH	1	
L3651	VLQ0163J221	COIL 220UH	1	
L3700	VLQ0163J220	COIL 22UH	1	
L3701	VLQ0576	COIL	1	
L3703	VLQ0163J220	COIL 22UH	1	
L3704	VLQ0163J100	COIL 10UH	1	
L3707	VLQ0163J6R8	COIL 6.8UH	1	
L3708	VLQ0163J2R7	COIL 2.7UH	1	
L3711	VLQ0163J6R8	COIL 6.8UH	1	
L3712	VLQ0163J2R7	COIL 2.7UH	1	
L3800-02	VLQ0163J220	COIL 22UH	3	
L3803	VLQ0163J181	COIL 180UH	1	
L3804	VLQ0163J560	COIL 56UH	1	
L3805-07	VLQ0163J470	COIL 47UH	3	
L3808	VLQ0163J270	COIL 27UH	1	
L3809	VLQ0163J6R8	COIL 6.8UH	1	
L3810	VLQ0163J5R6	COIL 5.6UH	1	
L3900	VLQ0163J100	COIL 10UH	1	
L3901,02	VLQ0163J220	COIL 22UH	2	
L3950	VLQ0163J470	COIL 47UH	1	
L3951,52	VLQ0163J560	COIL 56UH	2	
L3990	VLQ0163J180	COIL 18UH	1	
L3992	VLQ0163J390	COIL 39UH	1	
L3995	VLQ0163J150	COIL 15UH	1	
L3997	VLQ0319K101	COIL 100UH	1	
P3001,02	VJP3454B096	CONNECTOR (MALE)	2	
P3370	VJP1233T	CONNECTOR (MALE) 6P	1	
Q3070	MSB709-R	TRANSISTOR	1	
Q3071,72	2SK608-R	TRANSISTOR	2	
Q3700	MSD601-R	TRANSISTOR	1	
Q3701	MSB709-R	TRANSISTOR	1	
Q3702,03	MSD601-R	TRANSISTOR	2	
Q3704	MSB709-R	TRANSISTOR	1	
Q3707-09	MSB709-R	TRANSISTOR	3	
Q3710,11	MSD601-R	TRANSISTOR	2	
Q3712	MSB709-R	TRANSISTOR	1	
Q3715,16	MSB709-R	TRANSISTOR	2	
Q3717	MSD601-R	TRANSISTOR	1	
Q3718,19	2SB709A-R	TRANSISTOR	2	
Q3720	MSD602-R	TRANSISTOR	1	
Q3721	MSD601-R	TRANSISTOR	1	
Q3722	MSB709-R	TRANSISTOR	1	
Q3723	MSD601-R	TRANSISTOR	1	
Q3724	2SA1532-C	TRANSISTOR	1	
Q3800	MSB709-R	TRANSISTOR	1	
Q3801	MSC2295-B	TRANSISTOR	1	
Q3802	MSB709-R	TRANSISTOR	1	
Q3803	MSC2295-B	TRANSISTOR	1	
Q3804,05	MSB709-R	TRANSISTOR	2	
Q3806	MSC2295-B	TRANSISTOR	1	
Q3807	MSB709-R	TRANSISTOR	1	
Q3808,09	MSD601-R	TRANSISTOR	2	
Q3814	MSD601-R	TRANSISTOR	1	
Q3900,01	MSD601-R	TRANSISTOR	2	
Q3902	MSB709-R	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q3903	2SB709A-R	TRANSISTOR	1	
Q3904,05	2SA1532-C	TRANSISTOR	2	
Q3906,07	MSB709-R	TRANSISTOR	2	
Q3908	2SA1532-C	TRANSISTOR	1	
Q3950	2SC2404-D	TRANSISTOR	1	
Q3951,52	MSB709-R	TRANSISTOR	2	
Q3953	MSD601-R	TRANSISTOR	1	
Q3954-56	MSB709-R	TRANSISTOR	3	
Q3957-60	MSD601-R	TRANSISTOR	4	
Q3990	2SA1532-C	TRANSISTOR	1	
Q3991	2SB709A-R	TRANSISTOR	1	
Q3995	2SB709A-R	TRANSISTOR	1	
Q3996	2SA1532-C	TRANSISTOR	1	
Q3997	2SB709A-R	TRANSISTOR	1	
QR3800,01	MUN2213	TRANSISTOR-RESISTOR	2	
QR3900,01	MUN2213	TRANSISTOR-RESISTOR	2	
QR3902	MUN2112	TRANSISTOR-RESISTOR	1	
R3011	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3017	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3018	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3019	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3022	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3023	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3024	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3025	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R3026	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3027	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3029	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3032	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3033	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3034	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3035	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3036	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3037	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3038,39	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3040	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3043	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3044,45	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3046	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3050-53	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R3054-57	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R3059	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3061,62	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3064	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3065-67	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3068	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3070	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3071	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3072	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3073	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3074	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3075	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3076	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3077	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3078	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3079	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3080	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3081,82	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3083	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3084	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3085	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3086,87	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R3088,89	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3090	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3091	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3092,93	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3094	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3100-08	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	9	
R3112	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3113-23	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	11	
R3125,26	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3127	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3128	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3129,30	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R3131	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3132	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3133,34	ERJ6RBD331	M.RESISTOR CH 1/10W 330	2	
R3137	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3139	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3140	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3142	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3143,44	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3158	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3160,61	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3162	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3163	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3164,65	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	2	
R3166	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R3167	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R3168	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3169	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3170	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3171,72	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R3173	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3174	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3175	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3176	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3177,78	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3179	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3180	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3181	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3182	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3183	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3184,85	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3200	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3202	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3208-14	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	7	
R3216	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3217-28	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	12	
R3230,31	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3232-34	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3235	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3237	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3238	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3240	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3241	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3242	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
R3243	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3244	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3246	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3248,49	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3257,58	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3260	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3261	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3262-64	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R3265	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3266	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3267-69	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3270	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3271	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3280,81	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3282,83	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3284	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3285	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R3286	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3287,88	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R3289	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3291	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3292	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3293	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3294	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3295	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3296	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3300-13	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	14	
R3315,16	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3317	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3318-21	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R3324	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3325	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3326	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3327,28	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3330	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3332-34	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3340,41	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3342	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3343	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3344	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3345	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3346	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3351	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3373	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3374-86	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	13	
R3388-90	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3391,92	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3393,94	ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R3395-98	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R3400-07	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R3409-16	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R3421,22	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3428,29	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R3430	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3432-39	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	8	
R3441	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3442,43	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
R3444-67	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	24	
R3468-91	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	24	
R3492	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3493-97	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	5	
R3498,99	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
R3500-02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3503	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3506-08	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3510-31	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	22	
R3536-38	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R3541,42	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3543,44	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3550	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3578-80	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3581,82	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3584-86	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3588-90	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3598	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3650	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3651-53	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R3654	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3655	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3656,57	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	2	
R3658	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3659	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R3660	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3661	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3662	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3663	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R3664	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3665	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3666	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R3667	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3668	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3669	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R3700	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R3701,02	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R3703	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3704,05	ERJ3RBD331	M.RESISTOR CH 1/16W 330	2	
R3706	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3707	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3709	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3710	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3711	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3712	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3713	ERJ3RBD201	M.RESISTOR CH 1/16W 200	1	
R3715	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3716	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3717,18	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3719	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3720,21	ERJ3RBD471	M.RESISTOR CH 1/16W 470	2	
R3722	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3723	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3724	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3725	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3726	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3727	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3728	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3729	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3730	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3731	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3732	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3733	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3734	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3735	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3736	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3737	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3738	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R3739	ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R3740	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3741	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3744	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3745,46	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3747	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3748,49	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R3750	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3751,52	ERJ3RBD471	M.RESISTOR CH 1/16W 470	2	
R3753	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3754	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3755	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3756	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3757,58	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3761	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3762	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3763	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3764	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3765	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3766	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3767	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3768,69	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	2	
R3770	ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R3771	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3772	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3775	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3776	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3777	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3780	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3781	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3782	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3783	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3784	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3785	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3786	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3787	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3788	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3797	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3798	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R3799	ERJ6RBD752	M.RESISTOR CH 1/10W 7.5K	1	
R3804	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3805,06	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3807	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3808	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3810	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3811	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	1	
R3812	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3814	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3815	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3816	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3817	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3818	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3819,20	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3821	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3822	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3823	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3824,25	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3826,27	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R3828	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R3829	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3830	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3831	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3832	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R3833	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3834-36	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R3837	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3838	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3839	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3840-42	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3843	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3844	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3845,46	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3847	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3848	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3849,50	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3851	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3852	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3867	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3868	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3872	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3876	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3878,79	ERJ6RBD301	M.RESISTOR CH 1/10W 300	2	
R3880	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3881	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3882	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3883	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3884	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3885	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3886	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3887	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3888	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3889	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3895	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3896,97	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3898	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3899	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3900	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3901	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3902	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3903,04	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3905	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3906	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3907	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3908	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R3909	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3910,11	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3912	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3913	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R3915,16	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R3917	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3918	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3919,20	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R3921	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3922	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3923	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3924	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3925	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3926,27	ERJ6RBD821	M.RESISTOR CH 1/10W 820	2	
R3928,29	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R3930	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3931,32	ERJ6RBD821	M.RESISTOR CH 1/10W 820	2	
R3933	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3934,35	ERJ6RBD821	M.RESISTOR CH 1/10W 820	2	
R3936	VRE006610102	M.RESISTOR CH 1/10W 1K	1	
R3937	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3938	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3939	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3940	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3941	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3942,43	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R3944	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3945	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3946	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3947	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3948	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3949	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3950	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3951	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3952	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3953	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3954	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3955,56	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R3957	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3958	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3959	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3960,61	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R3962	ERJ6RBD221	M.RESISTOR CH 1/10W 220	1	
R3963	ERJ6RBD181	M.RESISTOR CH 1/10W 180	1	
R3964	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R3965	ERJ6RBD201	M.RESISTOR CH 1/10W 200	1	
R3966	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3967	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R3968	ERJ6RBD752	M.RESISTOR CH 1/10W 7.5K	1	
R3969	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3970	ERJ6RBD121	M.RESISTOR CH 1/10W 120	1	
R3971	ERJ6RBD271	M.RESISTOR CH 1/10W 270	1	
R3972	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3973	ERJ6RBD121	M.RESISTOR CH 1/10W 120	1	
R3974	ERJ6RBD271	M.RESISTOR CH 1/10W 270	1	
R3975	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R3976	ERJ6RED270	M.RESISTOR CH 1/10W 27	1	
R3977	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3978	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3979	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3980	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3981	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3982	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3983-85	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R3986	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3987	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3988	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3989	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3990	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3991	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3992,93	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R3994	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3995	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3996	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3997,98	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R3999	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
SW3950	VSS0372	SWITCH	1	
TG3001-04	VJR0646	TEST POINT	4	
TH3800	ERTD2FHL102S	THERMISTOR 1K	1	
TP3070	VJR0646	TEST POINT	1	
TP3100-06	VJR0646	TEST POINT	7	
TP3200	VJR0646	TEST POINT	1	
TP3650,51	VJR0646	TEST POINT	2	
TP3950	VJR0646	TEST POINT	1	
VC3070	ECV1ZW20X53T	TRIMMER	1	
VR3100	VRV0113B202	V.RESISTOR 2K	1	
VR3101	VRV0113B502	V.RESISTOR 5K	1	
VR3102	VRV0113B202	V.RESISTOR 2K	1	
VR3160	VRV0161B203	V.RESISTOR 20K	1	
VR3201	VRV0161B502	V.RESISTOR 5K	1	
VR3260	VRV0161B502	V.RESISTOR 5K	1	
VR3280	VRV0161B203	V.RESISTOR 20K	1	
VR3700	VRV0161B101	V.RESISTOR 100	1	
VR3701	VRV0113B501	V.RESISTOR 500	1	
VR3702	VRV0161B102	V.RESISTOR 1K	1	
VR3703	VRV0113B102	V.RESISTOR 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR3704	VRV0161B101	V.RESISTOR 100	1	
VR3705	VRV0161B102	V.RESISTOR 1K	1	
VR3706	VRV0161B101	V.RESISTOR 100	1	
VR3801	VRV0161B203	V.RESISTOR 20K	1	
VR3802,03	VRV0161B502	V.RESISTOR 5K	2	
VR3804,05	VRV0161B102	V.RESISTOR 1K	2	
VR3806,07	VRV0161B202	V.RESISTOR 2K	2	
VR3809,10	VRV0113B203	V.RESISTOR 20K	2	
VR3900	VRV0161B502	V.RESISTOR 5K	1	
VR3901	VRV0113B102	V.RESISTOR 1K	1	
VR3902	VRV0113B502	V.RESISTOR 5K	1	
VR3903	VRV0161B102	V.RESISTOR 1K	1	
VR3904	VRV0113B203	V.RESISTOR 20K	1	
VR3905	VRV0113B503	V.RESISTOR 50K	1	
VR3950	VRV0113B102	V.RESISTOR 1K	1	
VR3995	VRV0113B501	V.RESISTOR 500	1	
VR3996	VRV0113B102	V.RESISTOR 1K	1	
X3070	VSX0081	CRYSTAL OSCILLATOR	1	
X3160	VSX0338	CRYSTAL OSCILLATOR	1	
X3260	VSX0788	CRYSTAL OSCILLATOR	1	
X3280	VSX0338	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E4	VEP83410B	F4 VIDEO OUT P.C.BOARD	1	(RTL)FOR AJ-D850E
C3001	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3002	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3003	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3004	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3010	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3011,12	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	2	
C3013	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3014,15	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3016	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3017,18	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3019	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3020,21	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	2	
C3022	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3023	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3024,25	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3026	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3027,28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3029	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3030,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3032	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3033,34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3035	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3036,37	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3038	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3039,40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3041	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3042	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3050-57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C3058	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3070-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3075	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3076	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	1	
C3077	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3078	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3079,80	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3081	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3082	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C3083	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3084	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3085,86	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C3087	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3088,89	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3090	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3091,92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3100-04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3105,06	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	2	
C3107	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C3108	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3109	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3110	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3111	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3112,13	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	2	
C3114	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3117-19	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3150,51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3152,53	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3154	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3155	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3156,57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3160-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C3166,67	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C3168,69	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	2	
C3170,71	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3172,73	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3174	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3175,76	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3177	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3178	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3179-82	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C3183,84	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3200-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3207	ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3208	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3250,51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3252,53	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3254	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3255	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3256,57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3260-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C3266,67	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3268	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3269	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3270	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3280-83	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3284,85	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3286	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3287,88	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3289	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3290	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3291	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3292	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3300-04	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3330,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3340-43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3350-53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3370-83	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	14	
C3430	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3432-40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C3442,43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3445,46	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3452	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C3455	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3457	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3460	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3464	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3465	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3466	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3467,68	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3469	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3470	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3471	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3472-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3475	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3476-83	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C3484	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3485	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3486	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3487	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3500-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	12	
C3551-57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C3576-79	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3580,81	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C3582	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C3583-86	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3588-92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C3600	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C3601	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3602	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3603	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3604	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3605	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3606	ECEV1EV330Q	E.CAPACITOR CH 25V 33U	1	
C3607,08	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3609	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3610,11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3612	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3613,14	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3615	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3616,17	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3618	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3619,20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3621	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3622,23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3624	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3625,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3627	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3628	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3650	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C3651	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3652	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3653	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3654,55	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3656	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C3657	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3658	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3659	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3660	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3661,62	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3663	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C3664	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3665	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3666	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3700	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3701	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3702	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3703	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3704	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3705	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3706,07	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3708-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3711	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3712	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3713	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3714	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C3717-20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3721	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3725	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3726	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3727,28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3729	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3730	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3731	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3732	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3733,34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3735	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3739,40	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3745	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C3746	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3747,48	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3749	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3750	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3751	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3752,53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3754	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C3756-58	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	3	
C3759	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3760	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3761-64	ECEA1CGE221	E.CAPACITOR 16V 220U	4	
C3800	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3801,02	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3803	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3804	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3805	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3810	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3811	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C3812,13	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3814,15	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3817	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3818,19	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3820,21	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C3824	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3825,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3827,28	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3829	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3830	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3831	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3832,33	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3834	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3835,36	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3837	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3838	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3839	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3840	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3841-43	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3844	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3845,46	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3847	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3848,49	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3850-52	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3853	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3854,55	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3856	ECUX1C104KBV	C.CAPACITOR CH 16V 0.1U	1	
C3857-60	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C3861	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3862	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3864,65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3866	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3867	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3868	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3869	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C3870	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3871	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3873	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3875	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3876	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C3877	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3878	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3879	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3881	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3883	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3884	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C3885	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3886	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3890	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3893,94	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3900	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3901	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3902	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3903	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3904	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3905	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C3906	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3907	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3910,11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3914	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3915	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3918-20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C3921,22	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3924	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3925,26	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3927	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3928	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3929,30	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3931	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3932	ECUX1H020CCV	C.CAPACITOR CH 50V 2P	1	
C3933,34	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3935	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3936	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3937,38	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	2	
C3939	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3940	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C3942	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C3943	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3944	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3945	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3946	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3950	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3951	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3952,53	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3954	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3955	ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3957,58	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3959	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3960,61	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3962	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C3963-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3966	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3990	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3991	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3992	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C3993	ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3994,95	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C3996	ECUX1H070DCV	C.CAPACITOR CH 50V 7P	1	
C3997	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
D3070	MA335	DIODE	1	
D3150	M1MA152K	DIODE	1	
D3160	M1MA152K	DIODE	1	
D3250	M1MA152K	DIODE	1	
D3260	M1MA152K	DIODE	1	
D3550-52	MA701A	DIODE	3	
D3650	MA152WK	DIODE	1	
D3651	MA717	DIODE	1	
D3800,01	MA335	DIODE	2	
D3810,11	M1MA152K	DIODE	2	
D3950	M1MA152K	DIODE	1	
D3960,61	M1MA152K	DIODE	2	
FL3010-13	VLF1016A223	FILTER	4	
FL3700	VLF1294	FILTER	1	
FL3701,02	VLF1295	FILTER	2	
FL3900	VLF1016A223	FILTER	1	
FL3901	VLF1462	FILTER	1	
IC3010	NJM78L09UA	IC	1	
IC3011	NJM78L05UA	IC	1	
IC3012	NJM79L05UA	IC	1	
IC3013	NJM78L09UA	IC	1	
IC3014	NJM78L05UA	IC	1	
IC3015	NJM79L05UA	IC	1	
IC3016	NJM79L09UA	IC	1	
IC3050	SLA7220F5A	IC	1	
IC3051	EPM7128STC15	IC	1	
IC3070	MC74HC125AF	IC	1	
IC3071	NE521D	IC	1	
IC3072	MC74HC4053F	IC	1	
IC3073	NJM084M	IC	1	
IC3074	MC74HC4053F	IC	1	
IC3100	UPD65650J203	IC	1	
IC3101-03	SN74LS221NS	IC	3	
IC3104,05	SN74LS04NS	IC	2	
IC3106	MC74HC00AF	IC	1	
IC3109	D485505G25	IC	1	
IC3111	MC74HC574AF	IC	1	
IC3112	UPD42280G3	IC	1	
IC3150	MC74HC125AF	IC	1	
IC3151	NJM082BM	IC	1	
IC3160	MC74HC74AF	IC	1	
IC3161	74F112SJ	IC	1	
IC3162	MC74HC86AF	IC	1	
IC3163	MC74HC02AF	IC	1	
IC3164	SN74LS123NS	IC	1	
IC3165	SN74LS221NS	IC	1	
IC3166	SN74LS05NS	IC	1	
IC3167-69	MC74HC574AF	IC	3	
IC3170	SN74AS244AN	IC	1	
IC3171	NJM084M	IC	1	
IC3172	DAC10GS	IC	1	
IC3200	UPD65650J203	IC	1	
IC3202	SN74LS221NS	IC	1	
IC3250	MC74HC125AF	IC	1	
IC3251	NJM082BM	IC	1	
IC3260	NJM082BM	IC	1	
IC3261	74F08SJ	IC	1	
IC3262	SN74AS74ANS	IC	1	
IC3263	74F574SJ	IC	1	
IC3264,65	SN74AS244AN	IC	2	
IC3280-82	MC74HC574AF	IC	3	
IC3283	DAC10GS	IC	1	
IC3284	NJM082BM	IC	1	
IC3300,01	THCT574AF	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3302	T74HCT541AF	IC	1	
IC3303,04	THCT574AF	IC	2	
IC3330,31	SN74AS244AN	IC	2	
IC3340	EPM7128STC15	IC	1	
IC3350	MB87D132	IC	1	
IC3370	L7A1519	IC	1	
IC3371	EPM7128STC15	IC	1	
IC3372-74	D485505G25	IC	3	
IC3430	74ALS541SJ	IC	1	
IC3432-34	MC10H124M	IC	3	
IC3435	74ALS541SJ	IC	1	
IC3436	MC10H124M	IC	1	
IC3437,38	74F244SJ	IC	2	
IC3439,40	D485505G25	IC	2	
IC3500,01	SN74S1051NS	IC	2	
IC3502	74F541SJ	IC	1	
IC3503	74F245SJ	IC	1	
IC3504,05	74F541SJ	IC	2	
IC3506,07	UPD71055GB	IC	2	
IC3508,09	THCT574AF	IC	2	
IC3510,11	SN74S1051NS	IC	2	
IC3550,51	D485505G25	IC	2	
IC3552	CG46183-134	IC	1	
IC3581-84	D485505G25	IC	4	
IC3585,86	THCT574AF	IC	2	
IC3587	EPM7128STC15	IC	1	
IC3588,89	TLCX244FT	IC	2	
IC3591-93	TVHT244FT	IC	3	
IC3595	TVHT244FT	IC	1	
IC3596	XC62AP3002P	IC	1	
IC3600	AN78N09	IC	1	
IC3601	AN78N05	IC	1	
IC3602	AN79N09	IC	1	
IC3603	AN78N09	IC	1	
IC3604	NJM78L05UA	IC	1	
IC3605	NJM79L05UA	IC	1	
IC3606	AN79N09	IC	1	
IC3650	AN91A12S	IC	1	
IC3651	NE521D	IC	1	
IC3700	ADV7123KST50	IC	1	
IC3702-04	LT1228CS8	IC	3	
IC3801	DAC10GS	IC	1	
IC3802	NJM082BM	IC	1	
IC3804	MC74HC4053F	IC	1	
IC3805	M51272FP	IC	1	
IC3900	LT1228CS8	IC	1	
IC3901	NJM2534V	IC	1	
IC3902	DAC10GS	IC	1	
IC3903	NJM082BM	IC	1	
IC3904	AD828AR	IC	1	
IC3990	NJM2534V	IC	1	
IC3996	LT1228CS8	IC	1	
IC3997	CXD1175AM	IC	1	
IC3998	NJM78L05UA	IC	1	
L3001-07	VLP0133	COIL	7	
L3071	VLQ0163J221	COIL 220UH	1	
L3550	VLP0133	COIL	1	
L3650	VLQ0163J390	COIL 39UH	1	
L3651	VLQ0163J221	COIL 220UH	1	
L3700	VLQ0163J220	COIL 22UH	1	
L3701	VLQ0576	COIL	1	
L3703	VLQ0163J220	COIL 22UH	1	
L3704	VLQ0163J100	COIL 10UH	1	
L3707	VLQ0163J6R8	COIL 6.8UH	1	
L3708	VLQ0163J2R2	COIL 2.2UH	1	
L3711	VLQ0163J6R8	COIL 6.8UH	1	
L3712	VLQ0163J2R2	COIL 2.2UH	1	
L3800-02	VLQ0163J220	COIL 22UH	3	
L3803	VLQ0163J390	COIL 39UH	1	
L3804	VLQ0163J121	COIL 120UH	1	
L3805-07	VLQ0163J470	COIL 47UH	3	
L3808	VLQ0163J150	COIL 15UH	1	
L3809	VLQ0163J5R6	COIL 5.6UH	1	
L3810	VLQ0163J6R8	COIL 6.8UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L3900	VLQ0163J100	COIL 10UH	1	
L3901,02	VLQ0163J220	COIL 22UH	2	
L3950	VLQ0163J101	COIL 100UH	1	
L3951,52	VLQ0163J470	COIL 47UH	2	
L3990	VLQ0163J180	COIL 18UH	1	
L3992	VLQ0163J390	COIL 39UH	1	
L3995	VLQ0163J150	COIL 15UH	1	
L3997	VLQ0319K101	COIL 100UH	1	
P3001,02	VJP3454B096	CONNECTOR (MALE)	2	
P3370	VJP1233T	CONNECTOR (MALE) 6P	1	
Q3070	MSB709-R	TRANSISTOR	1	
Q3071,72	2SK608-R	TRANSISTOR	2	
Q3700	MSD601-R	TRANSISTOR	1	
Q3701	MSB709-R	TRANSISTOR	1	
Q3702,03	MSD601-R	TRANSISTOR	2	
Q3704	MSB709-R	TRANSISTOR	1	
Q3707-09	MSB709-R	TRANSISTOR	3	
Q3710,11	MSD601-R	TRANSISTOR	2	
Q3712	MSB709-R	TRANSISTOR	1	
Q3715,16	MSB709-R	TRANSISTOR	2	
Q3717	MSD601-R	TRANSISTOR	1	
Q3718,19	2SB709A-R	TRANSISTOR	2	
Q3720	MSD602-R	TRANSISTOR	1	
Q3721	MSD601-R	TRANSISTOR	1	
Q3722	MSB709-R	TRANSISTOR	1	
Q3723	MSD601-R	TRANSISTOR	1	
Q3724	2SA1532-C	TRANSISTOR	1	
Q3800	MSB709-R	TRANSISTOR	1	
Q3801	MSC2295-B	TRANSISTOR	1	
Q3802	MSB709-R	TRANSISTOR	1	
Q3803	MSC2295-B	TRANSISTOR	1	
Q3804,05	MSB709-R	TRANSISTOR	2	
Q3806	MSC2295-B	TRANSISTOR	1	
Q3807	MSB709-R	TRANSISTOR	1	
Q3808,09	MSD601-R	TRANSISTOR	2	
Q3810	XN6501	TRANSISTOR-RESISTOR	1	
Q3811,12	MSC2295-B	TRANSISTOR	2	
Q3813	MSB709-R	TRANSISTOR	1	
Q3814	MSD601-R	TRANSISTOR	1	
Q3900,01	MSD601-R	TRANSISTOR	2	
Q3902	MSB709-R	TRANSISTOR	1	
Q3903	2SB709A-R	TRANSISTOR	1	
Q3904,05	2SA1532-C	TRANSISTOR	2	
Q3906,07	MSB709-R	TRANSISTOR	2	
Q3908	2SA1532-C	TRANSISTOR	1	
Q3950	2SC2404-D	TRANSISTOR	1	
Q3951,52	MSB709-R	TRANSISTOR	2	
Q3953	MSD601-R	TRANSISTOR	1	
Q3954-56	MSB709-R	TRANSISTOR	3	
Q3957-60	MSD601-R	TRANSISTOR	4	
Q3990	2SA1532-C	TRANSISTOR	1	
Q3991	2SB709A-R	TRANSISTOR	1	
Q3995	2SB709A-R	TRANSISTOR	1	
Q3996	2SA1532-C	TRANSISTOR	1	
Q3997	2SB709A-R	TRANSISTOR	1	
R3011	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3017	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3018	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3019	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3022	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3023	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3024	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3025	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R3026	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3027	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3029	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3032	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3033	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3034	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3035	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3036	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3037	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3038,39	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3040	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3043	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3044,45	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3046	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3050-53	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R3054-56	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3061,62	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3064	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3065-67	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3068	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3070	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3071	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3072	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3073	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3074	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3075	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3076	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3077	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3078	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3079	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3080	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3081,82	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3083	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3084	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3085	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3086,87	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R3088,89	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3090	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3091	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3092,93	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3094	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3095-97	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3099	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3100-08	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	9	
R3112	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3113-23	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	11	
R3125,26	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3127	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3128	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3129,30	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R3131	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3132	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3133,34	ERJ6RBD331	M.RESISTOR CH 1/10W 330	2	
R3137	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3139	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3141	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3142	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3143,44	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3150	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3151	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3152,53	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3154	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3155	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3156,57	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3160,61	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3162	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3163	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3164,65	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	2	
R3166	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R3167	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R3168	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3169	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3170	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3171,72	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R3173	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3174	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3175	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3176	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3177,78	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3179	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3180	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3181	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3182	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3183	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3184,85	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3200	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3202	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3208-14	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	7	
R3216	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3217-28	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	12	
R3230,31	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3232-34	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3235	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3237	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3238	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3240	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3241	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3242	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R3243	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3244	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3245	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3246	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3248,49	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3250	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3251	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3252,53	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3254	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3255	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3256,57	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3260	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3261	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3262	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3263	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3264	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3265	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3266	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3267-69	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3270	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3271	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3280,81	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3282,83	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3284	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3285	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R3286	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3287,88	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	2	
R3289	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3291	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3292	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3293	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3294	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3295	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3296	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3300-13	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	14	
R3315,16	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3317	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3318-21	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R3324	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3325	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3326	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3327,28	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3330	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3332-34	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3340,41	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3342	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3343	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3344	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3345	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3346	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3351	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3373	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3374-86	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	13	
R3388-90	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3391,92	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3395-98	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R3400-07	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R3409-16	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R3421,22	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3428,29	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R3430	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3432-39	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	8	
R3441	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3442,43	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	2	
R3444-67	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	24	
R3468-91	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	24	
R3492	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3493-97	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	5	
R3498,99	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	2	
R3500-02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3503	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3506-08	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3510-31	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	22	
R3536-38	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R3541,42	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3543,44	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3550	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3578-80	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3581,82	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3584-86	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3588-90	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3598	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3650	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3651-53	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R3654	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3655	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3656,57	ERJ3GEYG822	M.RESISTOR CH 1/16W 8.2K	2	
R3658	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3659	ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R3660	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3661	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3662	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3663	ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R3664	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3665	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3666	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R3667	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3668	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3669	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R3700	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R3701,02	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R3703	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3704,05	ERJ3RBD331	M.RESISTOR CH 3W 330	2	
R3706	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3707	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3709	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3710	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3711	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3712	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3713	ERJ3RBD201	M.RESISTOR CH 3W 200	1	
R3715	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3716	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3717	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3718	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R3719	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3720,21	ERJ3RBD471	M.RESISTOR CH 3W 470	2	
R3722	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3723	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3724	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3725	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3726	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3727	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3728	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3729	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3730	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3731	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3732	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3733	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3734	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3735	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3736	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3737	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3739	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3740	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3741	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3744	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3745,46	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3747	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3748,49	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R3750	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3751,52	ERJ3RBD471	M.RESISTOR CH 3W 470	2	
R3753	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3754	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3755	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3756	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3757,58	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3761	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3762	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3763	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3764	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3765	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3766	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3767	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3768	ERJ3GEYJ270	M.RESISTOR CH 1/16W 27	1	
R3770	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R3771	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3772	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3775	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3776	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3777	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3780	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3781	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3782	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3783	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3784	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3785	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3786	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3787	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3788	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3797	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3798	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R3804	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3805,06	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3807	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3808	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3810	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3811,12	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3814	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3815	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3816	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3817	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3818	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3819,20	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3821	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3822	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3823	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3824,25	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3826,27	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R3828	ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R3829	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3830	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3831	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3832	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R3833	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3834-36	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	3	
R3837	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3838	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3840-42	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R3843	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3844	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3846	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3847	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3848	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3850	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3851	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3852	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3853	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3854	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3855	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3856	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3857	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3858	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3859	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3860,61	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	2	
R3862-64	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	3	
R3865	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3866	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3867	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3868	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3872	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3877	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3878,79	ERJ6RBD301	M.RESISTOR CH 1/10W 300	2	
R3880	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3881	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3882	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3883	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3884	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3885	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3886	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3887	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3888	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3889	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3890,91	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3895	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3896,97	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R3898	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3899	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3900	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3901	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3902	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R3903	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R3904	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3905	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3906	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3907	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3908	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R3909	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3910,11	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R3912	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3913	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R3915,16	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R3917	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3918	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3919,20	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	2	
R3921	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3922	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3923	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3924	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3925	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3926,27	ERJ6RBD821	M.RESISTOR CH 1/10W 820	2	
R3928,29	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R3930	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3931,32	ERJ6RBD821	M.RESISTOR CH 1/10W 820	2	
R3933	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3934,35	ERJ6RBD821	M.RESISTOR CH 1/10W 820	2	
R3936	VRE006610102	M.RESISTOR CH 1/10W 1K	1	
R3937	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3938	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3939	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3940	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3941	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3942,43	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R3944	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3945	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3948	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3949	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3950	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3951	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3952	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R3953	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3954	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3955,56	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R3957	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3958	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3959	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3960,61	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3962	ERJ6RBD221	M.RESISTOR CH 1/10W 220	1	
R3965	ERJ6RBD201	M.RESISTOR CH 1/10W 200	1	
R3966	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3967	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R3969	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3970	ERJ6RBD121	M.RESISTOR CH 1/10W 120	1	
R3972	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3973	ERJ6RBD121	M.RESISTOR CH 1/10W 120	1	
R3975	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R3976	ERJ6RED270	M.RESISTOR CH 1/10W 27	1	
R3977	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3978	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3979	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3980	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3981	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3982	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3983-85	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R3986	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3987	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3988	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3989	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3990	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3991	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3992,93	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R3994	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3995	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3996	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3997,98	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R3999	ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
TG3001-04	VJR0646	TEST POINT	4	
TH3800	ERTD2FHL102S	THERMISTOR 1K	1	
TP3070	VJR0646	TEST POINT	1	
TP3100-06	VJR0646	TEST POINT	7	
TP3200	VJR0646	TEST POINT	1	
TP3650,51	VJR0646	TEST POINT	2	
TP3950	VJR0646	TEST POINT	1	
VC3070	ECV1ZW20X53T	TRIMMER	1	
VC3800	ECV1ZW20X53T	TRIMMER	1	
VR3100	VRV0113B202	V.RESISTOR 2K	1	
VR3101	VRV0113B502	V.RESISTOR 5K	1	
VR3102	VRV0113B202	V.RESISTOR 2K	1	
VR3160	VRV0161B203	V.RESISTOR 20K	1	
VR3201	VRV0161B502	V.RESISTOR 5K	1	
VR3260	VRV0161B502	V.RESISTOR 5K	1	
VR3280	VRV0161B203	V.RESISTOR 20K	1	
VR3700	VRV0161B101	V.RESISTOR 100	1	
VR3701	VRV0113B501	V.RESISTOR 500	1	
VR3702	VRV0161B102	V.RESISTOR 1K	1	
VR3703	VRV0113B102	V.RESISTOR 1K	1	
VR3704	VRV0161B101	V.RESISTOR 100	1	
VR3705	VRV0161B102	V.RESISTOR 1K	1	
VR3706	VRV0161B101	V.RESISTOR 100	1	
VR3801	VRV0161B203	V.RESISTOR 20K	1	
VR3802,03	VRV0161B502	V.RESISTOR 5K	2	
VR3804,05	VRV0161B102	V.RESISTOR 1K	2	
VR3806,07	VRV0161B202	V.RESISTOR 2K	2	
VR3808	VRV0161B102	V.RESISTOR 1K	1	
VR3900	VRV0161B502	V.RESISTOR 5K	1	
VR3901	VRV0113B102	V.RESISTOR 1K	1	
VR3902	VRV0113B502	V.RESISTOR 5K	1	
VR3903	VRV0161B102	V.RESISTOR 1K	1	
VR3950	VRV0113B102	V.RESISTOR 1K	1	
VR3995	VRV0113B501	V.RESISTOR 500	1	
VR3996	VRV0113B102	V.RESISTOR 1K	1	
X3070	VSX0363	CRYSTAL OSCILLATOR	1	
X3150	VSX0567A	CRYSTAL OSCILLATOR	1	
X3160	VSX0270	CRYSTAL OSCILLATOR	1	
X3250	VSX0567A	CRYSTAL OSCILLATOR	1	
X3260	VSX0788	CRYSTAL OSCILLATOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
X3280	VSX0270	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E5	VEP83394A	F5 REC PB P.C.BOARD	1	(RTL)
■	VEP83405A	V BLK SUB P.C.BOARD	1	(RTL)FOR VEP83394A
C1	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C1	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C2	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C2	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C3	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C4,C5	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	FOR VEP83405A
C6	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	FOR VEP83405A
C20-22	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405A
C23-25	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	3	FOR VEP83405A
C26-28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405A
C29,30	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	2	FOR VEP83405A
C31-33	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405A
C34	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	FOR VEP83405A
C35	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C36	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	FOR VEP83405A
C37-39	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405A
C50,51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C52	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C61	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C62	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C63	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C64	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C66	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C67	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C68	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C68	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C69-71	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	3	
C72-87	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	16	
C88-95	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	8	
C96,97	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C98	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C99,00	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C101	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C103	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C104	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C105	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C107	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C108	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C109	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C110	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C111	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C112	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C113	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C113	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C114	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C115	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C116	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C117	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C118	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C120	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405A
C130-36	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C170-76	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C178	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C179-81	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C182	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C183	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C184	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C185	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C186,87	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C188	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C189-92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C193	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C194	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C195	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C196	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C197	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C198	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C199	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C200	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C201	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C202	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C203	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C204	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C205	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C206	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C207	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C209	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C210	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C211	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C212	VCK0150	C.CAPACITOR	1	
C213,14	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C215,16	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C219,20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C300-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C306	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C307-15	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C330,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C333-35	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C336	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C337-56	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	20	
C380	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C381	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C382-88	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C400-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C404	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C405	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C406-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C420	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C421	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C422	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C423	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C424	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C425	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C426	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C427	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C428	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C440	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C441	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C442	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C443	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C444-50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C460-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C467-70	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C471	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C472	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C473	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C474	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C475	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C476	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C477	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C478	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C479	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C481	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C482	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C483	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C484	VCK0151	C.CAPACITOR	1	
C485	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C486	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C487	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C488	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C489,90	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C491	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C492	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C493-00	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C510-18	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C519	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C520-23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C542-44	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C549,50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C670-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C760-71	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	12	
C780-82	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C784	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C800-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	12	
C840	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C841-44	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C870	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C871,72	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C910,11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C912	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C913	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C914	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C915	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C916-18	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	3	
C980-86	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C987	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C1022,23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C1026-29	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C1050-54	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C1060-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C1110	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
D20,21	MA152WK	DIODE	2	FOR VEP83405A
D60-63	MA701A	DIODE	4	
D170	MA715	DIODE	1	
D171	MA335	DIODE	1	
D172,73	MA152WK	DIODE	2	
FL60-63	VLF0576	FILTER	4	
FL460	VLF1118	FILTER	1	
FL461	VLF1116	FILTER	1	
FL462	VLF1117	FILTER	1	
IC20	NJM78L09UA	IC	1	FOR VEP83405A
IC21	NJM78L05UA	IC	1	FOR VEP83405A
IC22	NJM79L09UA	IC	1	FOR VEP83405A
IC23	MM74HC221AM	IC	1	FOR VEP83405A
IC24	MC74HC125AF	IC	1	FOR VEP83405A
IC25	NJM082BM	IC	1	FOR VEP83405A
IC51	T203E3801AF1	IC	1	FOR VEP83405A
IC52,53	T74VHC244F	IC	2	FOR VEP83405A
IC54,55	TC7S04F	IC	2	FOR VEP83405A
IC56	T74VHC244F	IC	1	FOR VEP83405A
IC61	NJM78L09UA	IC	1	
IC62	NJM79L09UA	IC	1	
IC63	NJM78L05UA	IC	1	
IC65-67	XC62AP3202P	IC	3	
IC68	XC62AP2302PL	IC	1	
IC69-71	XC62AP3202P	IC	3	
IC72	XC62AP2302PL	IC	1	
IC73,74	XC62AP3202P	IC	2	
IC75	74F244SJ	IC	1	
IC101	EPF10K20TC-4	IC	1	FOR VEP83405A
IC101	SN74S1051NS	IC	1	
IC102	CY7C19920ZC	IC	1	FOR VEP83405A
IC102	SN74S1051NS	IC	1	
IC103	74F541SJ	IC	1	
IC103	S80726ANDP	IC	1	FOR VEP83405A
IC104	74F541SJ	IC	1	
IC104	VSI3028A	IC	1	FOR VEP83405A
IC105	CY7C19920ZC	IC	1	FOR VEP83405A
IC105	TC7S04F	IC	1	
IC106	74F245SJ	IC	1	
IC107	74F138SJ	IC	1	
IC108,09	UPD71055GB	IC	2	
IC110	T74VHC244F	IC	1	
IC111	UPD71055GB	IC	1	
IC112	TC7S08F	IC	1	
IC114	74AC139SJ	IC	1	
IC115	74F244SJ	IC	1	
IC116	TC7S04F	IC	1	
IC130	TCVHC153F	IC	1	
IC131	UPD65841G025	IC	1	
IC132,33	T74VHCT244F	IC	2	
IC170	NJM082BM	IC	1	
IC171	NJM319M	IC	1	
IC172	MC74HC125AF	IC	1	
IC173	TC7S66F	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC174,75	NJM082BM	IC	2	
IC176	TC7S04F	IC	1	
IC177	UPC2384GA	IC	1	
IC178	74F244SJ	IC	1	
IC181	74F244SJ	IC	1	
IC184	T74LCX244F	IC	1	
IC185	MC10H124M	IC	1	
IC186-88	T74LCX244F	IC	3	
IC189	XC62AP3202P	IC	1	
IC190	TC7S08F	IC	1	
IC300,01	T74VHC244F	IC	2	
IC302	MN67372A2	IC	1	
IC303	MN4707F	IC	1	
IC304	T74VHC244F	IC	1	
IC330	T74VHC244F	IC	1	
IC331	MC10H125M	IC	1	
IC332	T74LCX244F	IC	1	
IC334	M65401FP	IC	1	
IC335	MN673711	IC	1	
IC336-39	T74VHC245F	IC	4	
IC380	L7A1433	IC	1	
IC381	TC7S66F	IC	1	
IC382	MB81V4260S7	IC	1	
IC400	L7A1434	IC	1	
IC401	MC10H124M	IC	1	
IC402,03	TC7S08F	IC	2	
IC420	L7A1434	IC	1	
IC440	T74VHC08F	IC	1	
IC441	L7A1433	IC	1	
IC442	TC7S66F	IC	1	
IC443	MB81V4260S7	IC	1	
IC461	MN673711	IC	1	
IC462	M65401FP	IC	1	
IC463	M52660FP	IC	1	
IC464	TCVHC257F	IC	1	
IC465	T74VHCT244F	IC	1	
IC466	EPM7128STC15	IC	1	BLANK ROM
ID466	VVVSI3084A		1	SOFTWARE
IC510	MN67372A2	IC	1	
IC511	T74VHC244F	IC	1	
IC512	MN4707F	IC	1	
IC540,41	T74VHC244F	IC	2	
IC544	T74VHC32F	IC	1	
IC545,46	TC4W53F	IC	2	
IC670	T74VHC244F	IC	1	
IC671	T160G70-1601	IC	1	
IC760-63	UPD42280G3	IC	4	
IC764-67	74ALS541SJ	IC	4	
IC780	EPM7128STC15	IC	1	BLANK ROM
ID780	VVVSI3084A		1	SOFTWARE
IC782	T74VHC244F	IC	1	
IC783	D485505G25	IC	1	
IC784	T74VHC244F	IC	1	
IC800	UPD42280G3	IC	1	
IC801	MC10H125M	IC	1	
IC802,03	T74LCX244F	IC	2	
IC804	T74VHC74F	IC	1	
IC805	UPD65843G026	IC	1	
IC840	UPD65868D022	IC	1	
IC870	VSI2705	IC	1	
IC871	T74VHC08F	IC	1	
IC910	VSI2705	IC	1	
IC911	T74VHC08F	IC	1	
IC912	T74VHCU04F	IC	1	
IC913	S80727ANDQ	IC	1	
IC980	T74VHC244F	IC	1	
IC981-83	TCVHC257F	IC	3	
IC984,85	T74VHCT244F	IC	2	
IC986	T74VHC74F	IC	1	
IC1021	UPD42280G3	IC	1	
IC1050,51	T74VHC244F	IC	2	
IC1052	TC7S04F	IC	1	
IC1053,54	T74VHC244F	IC	2	
IC1110	T74VHC244F	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IS104	VJS3109	CONNECTOR (FEMALE)	1	FOR VEP83405A
L60-62	VLP0133	COIL	3	
L170-72	VLQ0319K470	COIL 47UH	3	
L174	VLQ0319M1R5	COIL 1.5UH	1	
L175	VLQ0163J3R9	COIL 3.9UH	1	
L176	VLQ0319K470	COIL 47UH	1	
L420	VLQ0163J1R5	COIL 1.5UH	1	
L460-62	VLQ0319K100	COIL 10UH	3	
P1	VJP3454B096	CONNECTOR (MALE)	1	
P1	VJS4064N160	CONNECTOR	1	FOR VEP83405A
P2	VJP3454B096	CONNECTOR (MALE)	1	
P60	VJP1246T	CONNECTOR (MALE) 6P	1	
P1050	VJP3418B060	CONNECTOR (MALE)	1	
P1060	VJP4064N160C	CONNECTOR (MALE)	1	
Q170	2SC2295-C	TRANSISTOR	1	
R1	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R1	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R2	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R2	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R3-19	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	17	
R20	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	FOR VEP83405A
R21	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	FOR VEP83405A
R21	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R22	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	FOR VEP83405A
R22	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R23	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R23	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R24	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R24	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R25	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	FOR VEP83405A
R25	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R26	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	FOR VEP83405A
R26	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R27	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	FOR VEP83405A
R27	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R28	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R28-46	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	19	
R47	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R48-53	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	6	
R54	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R54	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R55	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R64,65	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R67-02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	12	FOR VEP83405A
R78	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R79,02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	FOR VEP83405A
R80	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R81	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R81	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R82-02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP83405A
R84,85	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R87	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R92-95	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	FOR VEP83405A
R96	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R98	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R101	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R102	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R102	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R103	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R103	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R104	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R105	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R106	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R106	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R107	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R107	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R108	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R108	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R109	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R109	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R110	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R110	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R111	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R111-13	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	3	
R114	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP83405A
R114	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R115	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R115	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R116	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R116	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R117	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R117	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R118	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R118	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R119	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R119	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R120,21	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R122	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405A
R122	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R123	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R124	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R127	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R128	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R128	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405A
R132-35	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R136	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R137-40	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R144	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R145	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R147	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R149	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R151	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R152,53	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R154-61	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	8	
R170,71	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R172	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R173	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R174	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R175	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R176	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R177,78	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R179	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R180	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R181	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R182	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R183	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R184,85	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R186	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R187	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R188	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R189	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R190	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R191,92	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R193	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R194,95	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R196	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R197	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R198	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R199	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R200	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R200	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R201	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405A
R201,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	FOR VEP83405A
R202	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R203	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R204	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R205	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R206	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R207,08	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R209,10	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R211,12	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R213	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R216-22	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	7	
R223	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R228-35	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	8	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R236-39	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R240	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R241	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R242	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R243	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R244	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R245	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R246	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R247	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R248	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R249	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R250	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R251	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R252	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R253	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R254	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R255	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R256-58	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R260,61	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R264-67	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	4	
R272-87	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	16	
R288	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R290	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R291	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R293	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R300-15	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	16	
R316,17	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R318,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R320	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R330,31	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R333-36	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R337,38	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R340,41	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R342	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R344-48	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	5	
R351	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R353-61	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	9	
R362-65	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R366-74	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	9	
R380	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R400	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R401	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R402	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R403	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R404	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R407	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R408	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R409	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R410	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R420	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R421	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R422	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R440,41	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R442	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R443	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R444-53	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	10	
R462	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R464-66	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R469	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R470	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R471	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R472	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R473	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R476	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R477	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R478	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R480	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R481	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R483	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R484	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R487	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R488	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R489-94	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	6	
R497	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R510	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R540,41	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R543	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R544	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R555	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R557	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R654	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R670-72	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R673,74	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R675	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R676-91	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	16	
R713	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R715	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R760	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R765	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R766	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R781,82	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R784	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R800-03	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R804	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R806-08	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R811,12	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R815	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R819	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R821	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R826	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R827	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R828	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R840-48	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	9	
R849-54	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	6	
R855	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R856-59	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R860-64	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	5	
R870	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R871	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R873,74	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R876,77	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R878,79	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R880	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R882	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R883	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R886	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R887,88	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R889-96	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	8	
R897	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R898	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R899	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R900	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R901	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R910	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R911	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R912	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R913	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R915,16	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R918	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R919	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R920	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R921	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R922	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R923,24	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R926,27	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R928	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R930	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R934,35	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R937	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R938-40	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R941,42	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R943,44	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R945	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R946	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R947	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R948	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R949,50	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R951-53	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R954	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R955,56	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R957	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R958	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R959	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R960	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R961	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R962	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R963	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R964	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R965	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R966	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R967	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R980-87	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R988-93	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	6	
R994-07	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	14	
R1009	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R1020,21	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R1023-27	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R1029-36	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	8	
R1040	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R1041-48	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	8	
R1050	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R1051	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1060	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1111	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1112	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R1115	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1150	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
SW100	VSS0342	SWITCH	1	
SW330	VSS0367-02B	SWITCH	1	
SW331	VSS0367-08B	SWITCH	1	
TG1-G3	EYF6CU	TEST POINT	3	
TG13-15	EYF6CU	TEST POINT	3	FOR VEP83405A
TG171	VJR0646	TEST POINT	1	
TG462	VJR0646	TEST POINT	1	
TG910	EYF6CU	TEST POINT	1	
TP1-12	EYF6CU	TEST POINT	12	FOR VEP83405A
TP20-22	EYF6CU	TEST POINT	3	FOR VEP83405A
TP50,51	EYF6CU	TEST POINT	2	FOR VEP83405A
TP130,31	EYF6CU	TEST POINT	2	
TP170	VJR0646	TEST POINT	1	
TP300,01	EYF6CU	TEST POINT	2	
TP303,04	EYF6CU	TEST POINT	2	
TP400	EYF6CU	TEST POINT	1	
TP421	EYF6CU	TEST POINT	1	
TP440,41	EYF6CU	TEST POINT	2	
TP460	VJR0646	TEST POINT	1	
TP510	EYF6CU	TEST POINT	1	
TP870,71	EYF6CU	TEST POINT	2	
TP911,12	EYF6CU	TEST POINT	2	
VC170	ECV1ZW50X53T	TRIMMER	1	
VR460-62	EVMEGSA00B24	V.RESISTOR 20K	3	
X20	VSX0975	CRYSTAL OSCILLATOR	1	FOR VEP83405A
X420	VSX0645	CRYSTAL OSCILLATOR	1	
X910	VSX0637	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
	VMX2020	P.C.BOARD POST	4	FOR VEP83405A
	XYN3+K6	SCREW	8	FOR VEP83405A

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E5	VEP83394B	F5 REC PB P.C.BOARD	1	(RTL)FOR AJ-D850E
■	VEP83405B	V BLK SUB P.C.BOARD	1	(RTL)FOR VEP83394B
C1	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C1	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C2	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C2	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C3	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C4,C5	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	FOR VEP83405B
C6	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	FOR VEP83405B
C20-22	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405B
C23-25	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	3	FOR VEP83405B
C26-28	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405B
C29,30	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	2	FOR VEP83405B
C31-33	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405B
C34	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	FOR VEP83405BFOR VEP83405
C35	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C36	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	FOR VEP83405B
C37-39	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	FOR VEP83405B
C50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C51	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C52	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C61	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C62	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C63	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C64	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C66	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C67	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C68	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C68	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C69-71	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	3	
C72-87	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	16	
C88-95	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	8	
C96-00	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C101	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C103	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C104	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C105	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C107	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C108	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C109	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C110	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C111	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C112	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C113	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C113	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C114	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C115	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C120	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	FOR VEP83405B
C130-36	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C170-76	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C178	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C179-81	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C182	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C183	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C184	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C185	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C186,87	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C188	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C189-92	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C193	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C194	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C195	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C196	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C197	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C198	ECEV1EN3R3Q	E.CAPACITOR CH 25V 3.3U	1	
C199	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C200	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C201	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C202	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C203	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C204	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C205	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C206	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C207	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C209	ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C210	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C211	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C212	VCK0150	C.CAPACITOR	1	
C213,14	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C215,16	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C219,20	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C300-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C306	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C307-15	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C330,31	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C333-35	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C336	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C337-56	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	20	
C380	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C381	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C382-88	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C400-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C404	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C405	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C406-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C420	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C421	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C422	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C423	ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C424	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C425	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C426	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C427	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C428	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C440	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C441	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C442	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C443	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C444-50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C460-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C467-70	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C471	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C472	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C473	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C474	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C475	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C476	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C477	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C478	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C479	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C481	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C482	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C483	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C484	VCK0151	C.CAPACITOR	1	
C485	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C486	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C487	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C488	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C489,90	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C491	ECUX1H682KBV	C.CAPACITOR CH 50V 6800P	1	
C492	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C493-00	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	8	
C510-18	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	9	
C519	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C520-23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C542-44	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C549,50	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C640,41	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C642	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C643	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C644-57	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	14	
C670-74	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C760-71	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	12	
C780-82	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C784	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C800-11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	12	
C840	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C841-44	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C870	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C871,72	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C910,11	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C912	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C913	ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C914	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C915	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C916-18	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	3	
C980-86	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	7	
C987	ECUX1H102JCV	C.CAPACITOR CH 50V 1000P	1	
C1020-23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C1026-29	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C1050-54	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C1060-65	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	6	
C1110-12	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
D20,21	MA152WK	DIODE	2	FOR VEP83405B
D60-63	MA701A	DIODE	4	
D170	MA715	DIODE	1	
D171	MA335	DIODE	1	
D172,73	MA152WK	DIODE	2	
FL60-63	VLF0576T	FILTER	4	
FL460	VLF1118	FILTER	1	
FL461	VLF1116	FILTER	1	
FL462	VLF1117	FILTER	1	
IC20	NJM78L09UA	IC	1	FOR VEP83405B
IC21	NJM78L05UA	IC	1	FOR VEP83405B
IC22	NJM79L09UA	IC	1	FOR VEP83405B
IC23	MM74HC221AM	IC	1	FOR VEP83405B
IC24	MC74HC125AF	IC	1	FOR VEP83405B
IC25	NJM082BM	IC	1	FOR VEP83405B
IC50	T74VHCT244F	IC	1	
IC51	T203E3801AF1	IC	1	FOR VEP83405B
IC52,53	T74VHC244F	IC	2	FOR VEP83405B
IC54,55	TC7S04F	IC	2	FOR VEP83405B
IC56	T74VHC244F	IC	1	FOR VEP83405B
IC61	NJM78L09UA	IC	1	
IC62	NJM79L09UA	IC	1	
IC63	NJM78L05UA	IC	1	
IC65-67	XC62AP3202PL	IC	3	
IC68	XC62AP2302P	IC	1	
IC69-71	XC62AP3202PL	IC	3	
IC72	XC62AP2302P	IC	1	
IC73,74	XC62AP3202PL	IC	2	
IC75	74F244SJ	IC	1	
IC101	EPF10K20TC-4	IC	1	FOR VEP83405B
IC101	SN74S1051NS	IC	1	
IC102	CY7C19920ZC	IC	1	FOR VEP83405B
IC102	SN74S1051NS	IC	1	
IC103	74F541SJ	IC	1	
IC103	S80726ANDP	IC	1	FOR VEP83405B
IC104	74F541SJ	IC	1	
IC104	VSI3028B	IC	1	FOR VEP83405B
IC105	CY7C19920ZC	IC	1	FOR VEP83405B
IC105	TC7S04F	IC	1	
IC106	74F245SJ	IC	1	
IC107	74F138SJ	IC	1	
IC108,09	UPD71055GB	IC	2	
IC110	T74VHC244F	IC	1	
IC111	UPD71055GB	IC	1	
IC112	TC7S08F	IC	1	
IC114	74AC139SJ	IC	1	
IC115	74F244SJ	IC	1	
IC116	TC7S04F	IC	1	
IC130	TCVHC153F	IC	1	
IC131	UPD65841G025	IC	1	
IC132,33	T74VHCT244F	IC	2	
IC170	NJM082BM	IC	1	
IC171	NJM319M	IC	1	
IC172	MC74HC125AF	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC173	TC7S66F	IC	1	
IC174,75	NJM082BM	IC	2	
IC176	TC7S04F	IC	1	
IC177	UPC2384GA	IC	1	
IC178	74F244SJ	IC	1	
IC181	74F244SJ	IC	1	
IC184	T74LCX244F	IC	1	
IC185	MC10H124M	IC	1	
IC186-88	T74LCX244F	IC	3	
IC189	XC62AP3202PL	IC	1	
IC190	TC7S08F	IC	1	
IC300,01	T74VHC244F	IC	2	
IC302	MN67372A2	IC	1	
IC303	MN4707F	IC	1	
IC304	T74VHC244F	IC	1	
IC330	T74VHC244F	IC	1	
IC331	MC10H125M	IC	1	
IC332	T74LCX244F	IC	1	
IC334	M65401FP	IC	1	
IC335	MN673711	IC	1	
IC336-39	T74VHC245F	IC	4	
IC380	L7A1433	IC	1	
IC381	TC7S66F	IC	1	
IC382	MB81V4260S7	IC	1	
IC400	L7A1434	IC	1	
IC401	MC10H124M	IC	1	
IC402,03	TC7S08F	IC	2	
IC420	L7A1434	IC	1	
IC440	T74VHC08F	IC	1	
IC441	L7A1433	IC	1	
IC442	TC7S66F	IC	1	
IC443	MB81V4260S7	IC	1	
IC461	MN673711	IC	1	
IC462	M65401FP	IC	1	
IC463	M52660FP	IC	1	
IC464	TCVHC257F	IC	1	
IC465	T74VHCT244F	IC	1	
IC466	EPM7128STC15	IC	1	
IC510	MN67372A2	IC	1	
IC511	T74VHC244F	IC	1	
IC512	MN4707F	IC	1	
IC540,41	T74VHC244F	IC	2	
IC544	T74VHC32F	IC	1	
IC545,46	TC4S53F	IC	2	
IC640	CY7C19920ZC	IC	1	
IC641	EPM7128STC15	IC	1	
IC642	CG25123-5106	IC	1	
IC643,44	UPD42280G3	IC	2	
IC645	CY7C19920ZC	IC	1	
IC670	T74VHC244F	IC	1	
IC671	T160G70-1601	IC	1	
IC760-63	UPD42280G3	IC	4	
IC764-67	74ALS541SJ	IC	4	
IC780	EPM7128STC15	IC	1	
IC782	T74VHC244F	IC	1	
IC783	D485505G25	IC	1	
IC784	T74VHC244F	IC	1	
IC800	UPD42280G3	IC	1	
IC801	MC10H125M	IC	1	
IC802,03	T74LCX244F	IC	2	
IC804	T74VHC74F	IC	1	
IC805	UPD65843G026	IC	1	
IC840	UPD65868D022	IC	1	
IC870	VSI2705	IC	1	
IC871	T74VHC08F	IC	1	
IC910	VSI2705	IC	1	
IC911	T74VHC08F	IC	1	
IC912	T74VHCU04F	IC	1	
IC913	S80727ANDQ	IC	1	
IC980	T74VHC244F	IC	1	
IC981-83	TCVHC257F	IC	3	
IC984,85	T74VHCT244F	IC	2	
IC986	T74VHC74F	IC	1	
IC1020,21	UPD42280G3	IC	2	
IC1050,51	T74VHC244F	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC1052	TC7S04F	IC	1	
IC1053,54	T74VHC244F	IC	2	
IC1110	T74VHC244F	IC	1	
IC1111	TC4W53F	IC	1	
IS104	VJS3109	CONNECTOR (FEMALE)	1	FOR VEP83405B
L60-62	VLP0133	COIL	3	
L170-72	VLQ0319K470	COIL 47UH	3	
L174	VLQ0319M1R5	COIL 1.5UH	1	
L175	VLQ0163J3R9	COIL 3.9UH	1	
L176	VLQ0319K470	COIL 47UH	1	
L420	VLQ0163J1R5	COIL 1.5UH	1	
L460-62	VLQ0319K100	COIL 10UH	3	
P1	VJP3454B096	CONNECTOR (MALE)	1	
P1	VJS4064K160E	CONNECTOR (FEMALE)	1	FOR VEP83405B
P2	VJP3454B096	CONNECTOR (MALE)	1	
P60	VJP1246T	CONNECTOR (MALE) 6P	1	
P1050	VJP3418B060	CONNECTOR (MALE)	1	
P1060	VJP4064K160C	CONNECTOR (MALE)	1	
P1110	VJP4064K040C	CONNECTOR (MALE)	1	
Q170	2SC2295-C	TRANSISTOR	1	
R1	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R1	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R2	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R2	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R3	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R3-19	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	17	
R20	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	FOR VEP83405B
R21	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	FOR VEP83405B
R21	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R22	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	FOR VEP83405B
R22	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R23	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R23	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R24	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R24	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R25	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	FOR VEP83405B
R25	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R26	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	FOR VEP83405B
R26	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R27	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	FOR VEP83405B
R27	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R28	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R28-46	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	19	
R47	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R48-53	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	6	
R54	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R54	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R55-57	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R58	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R59-63	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	5	
R64,65	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R66	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R78	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R78	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R80	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R80	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R81	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R81	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R82-02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	FOR VEP83405B
R84,85	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R87	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R92-95	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	FOR VEP83405B
R96	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R98	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R101	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R102	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R102	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R103	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R103	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R104	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R105	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R106	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R106	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R107	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R107	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R108	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R108	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R109	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R109	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R110	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R110	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R111	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R111-13	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	3	
R114	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	FOR VEP83405B
R114	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R115	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R115	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R116	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R116	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R117	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R117	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R118	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R118	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R119	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R119	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R120,21	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R122	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	FOR VEP83405B
R122	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R123	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R124	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R127	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R128	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R128	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	FOR VEP83405B
R132-35	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R136	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R137-40	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R144	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R145	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R147,48	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R150	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R152,53	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R154-61	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	8	
R170,71	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R172	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R173	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R174	ERJ3GEYG222	M.RESISTOR CH 1/16W 2.2K	1	
R175	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R176	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R177,78	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R179	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R180	ERJ3GEYG222	M.RESISTOR CH 1/16W 2.2K	1	
R181	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R182	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R183	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R184,85	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R186	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R187	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R188	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R189	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R190	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R191,92	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R193	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R194,95	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R196	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R197	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R198	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R199	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R200	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R200	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R201	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	FOR VEP83405B
R201,02	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	FOR VEP83405B
R202	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R203	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R204	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R205	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R206	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R207,08	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R209,10	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R211-13	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R216-22	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	7	
R223	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R228-35	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	8	
R236-39	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R240	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R241	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R242	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R243	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R244	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R245	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R246	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R247	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R248	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R249	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R250	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R251	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R252	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R253	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R254	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R255	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R256-58	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	3	
R260,61	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R264-67	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	4	
R272-87	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	16	
R288	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R290	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R291	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R293	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R300-15	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	16	
R316,17	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R318,19	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R320	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R330,31	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R333-36	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R337,38	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R340,41	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R342	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R344-48	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	5	
R351	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R353-61	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	9	
R362-65	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R366-74	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	9	
R380	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R400	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R401	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R402	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R403	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R404	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R407	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R408	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R409	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R410	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R420	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R421	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R422	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R440,41	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R442	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R443	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R444-53	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	10	
R462	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R464-66	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R469	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R470	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R471	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R472	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R473	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R476	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R477	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R478	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R480	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R481	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R483	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R484	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R487	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R488	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R489-94	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	6	
R497	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R510	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R540,41	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R543	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R544	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R547-50	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	4	
R551	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R552-54	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R555	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R556	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R640-42	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R643	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R644	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R645	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R647	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R651-53	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R655	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R659	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R670-72	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R675	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R713	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R714	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R760	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R765	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R766	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R781,82	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R784	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R800-03	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R804	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R806-08	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R811,12	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R815	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R819	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R821	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R826	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R827	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R828	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R840-48	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	9	
R849-54	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	6	
R855	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R856-59	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R860-64	ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	5	
R870	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R871	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R873,74	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R876,77	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R878,79	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R880	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R882	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R883	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R886	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R887,88	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R889-96	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	8	
R897	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R899	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R900	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R901	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R910	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R911	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R912	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R913	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R915,16	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R918	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R919	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R920	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R921	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R922	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R923,24	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R926,27	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R928	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R930	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R934,35	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R937	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R938-40	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R941,42	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R943,44	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R945	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R946	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R947	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R948	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R949,50	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R951-53	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R954	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R955,56	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R957	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R958	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R959	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R960	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R961	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R962	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R964	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R965	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R966	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R967	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R980-87	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	8	
R988-93	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	6	
R994-07	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	14	
R1009	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R1020,21	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R1023-27	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R1037	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R1040	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R1041-48	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	8	
R1050	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R1051	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1060	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1110	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1111	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1112	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R1113	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R1114	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1150	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
SW100	VSS0342	SWITCH	1	
SW330	VSS0367-02B	SWITCH	1	
SW331	VSS0367-08B	SWITCH	1	
SW1110	VSS0342	SWITCH	1	
TG1-G3	EYF6CU	TEST POINT	3	
TG13-15	EYF6CU	TEST POINT	3	FOR VEP83405B
TG171	VJR0646	TEST POINT	1	
TG462	VJR0646	TEST POINT	1	
TG910	EYF6CU	TEST POINT	1	
TP1-12	EYF6CU	TEST POINT	12	FOR VEP83405B
TP20-22	EYF6CU	TEST POINT	3	FOR VEP83405B
TP50,51	EYF6CU	TEST POINT	2	FOR VEP83405B
TP130,31	EYF6CU	TEST POINT	2	
TP170	VJR0646	TEST POINT	1	
TP300,01	EYF6CU	TEST POINT	2	
TP303,04	EYF6CU	TEST POINT	2	
TP400	EYF6CU	TEST POINT	1	
TP421	EYF6CU	TEST POINT	1	
TP440,41	EYF6CU	TEST POINT	2	
TP460	EYF6CU	TEST POINT	1	
TP510	EYF6CU	TEST POINT	1	
TP870,71	EYF6CU	TEST POINT	2	
TP911,12	EYF6CU	TEST POINT	2	
VC170	ECV1ZW50X53T	TRIMMER	1	
VR460-62	EVMEGSA00B24	V.RESISTOR 20K	3	
X20	VSX0973	CRYSTAL OSCILLATOR	1	FOR VEP83405B
X420	VSX0645	CRYSTAL OSCILLATOR	1	
X910	VSX0637	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
	VMX2020	SPACER	4	FOR VEP83405B
	XYN3+K5	SCREW	4	FOR VEP83405B
	XYN3+K6	SCREW	4	FOR VEP83405B

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E6	VEP83409B	F6 VIDEO IN P.C.BOARD	1	(RTL)FOR AJ-D850P
C1,C2	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C3	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C4	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C5-C7	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C8	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C9	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C20-26	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	7	
C27	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C28	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C29	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C30	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C31	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C32	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C33	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C51	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C101,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C103	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C104-06	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C107	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C108	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C109	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C110-12	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C113	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C114-16	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C117	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C118	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C119	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C120	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C133,34	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C135	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C136	ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C137	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C138	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C139	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C140	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C141	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C142	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C143	ECUX1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C144	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C145	ECEV1HVR68Q	E.CAPACITOR CH 50V 0.68U	1	
C146	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C151-58	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
C160	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C161	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C164	ECCF1H221JC	C.CAPACITOR 50V 220P	1	
C201-05	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C207-10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C211	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C251-54	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C256-58	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C262-66	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C301	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C302	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C303	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C304-06	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C307	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C308	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C309	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C310,11	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C312	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C317	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C318-21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C351	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C352	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C353	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C354	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C355	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C356	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C357	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C358	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C359	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C360	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C363-65	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C367	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C368	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C370-72	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C373	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C374	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C375	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C376-83	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
C401	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C402	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C403	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C404	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C405,06	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C407	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C408	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C409	ECEV1HVR47Q	E.CAPACITOR CH 50V 0.47U	1	
C410,11	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C417	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C418	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C419	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C420	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C421	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C425	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C426	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C427,28	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	2	
C429	ECEV0JN470Q	E.CAPACITOR CH6.3V 47U	1	
C430	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C431	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C432	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C433	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C434	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C435	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C436,37	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C438	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C439,40	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C441	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C442,43	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C444	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C445	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C446	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C447,48	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C450	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C451	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C452	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C453	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C454	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C455-57	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C458	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C459,60	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C461	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C462,63	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C464-70	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	7	
C472	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C473	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C474,75	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C476	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C477	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C478	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C479	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C480	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C481	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C482	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C483	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C484	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C485	ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C486	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C487,88	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	2	
C489	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C490-92	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C493,94	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C496	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C497,98	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C499	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C501	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C502	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C503	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C504	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C505	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C506	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C507	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C508	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C509	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C510	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C511	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C512	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C513	ECUX1H681JCN	C.CAPACITOR CH 50V 680P	1	
C514,15	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C516	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C518	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C519	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C520	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C522	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C523	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C524	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C525	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C526	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C527	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C528	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C529	ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C531	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C532	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C534	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C536	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C537	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C538	ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C539	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C540	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C541	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C542	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C545	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C550	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C551	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C552	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C553	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C554	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C555	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C556	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C557	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C558,59	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C561	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C562,63	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C565,66	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C567	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C568	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C569	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C570	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C571-73	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C601	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C602	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C603	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C604	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C605	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C606	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C607	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C608	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C609	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C610	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C612	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C613	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C614	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C615	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C616	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C617	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C618	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C619	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C621	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	1	
C622,23	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C624,25	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C626	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C627	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C629	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C651	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C652,53	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C654	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C655	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C701	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C702,03	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C704	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C705	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C706	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C707	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C708,09	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C710	ECUM1H010CCN	C.CAPACITOR CH 50V 1P	1	
C712-14	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C715	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C716	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C717	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C718	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C719	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C720,21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C722	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C723	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C724	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C725	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C726	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C727	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C728	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C730	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C731	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C732	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C733	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C734	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C735-40	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C751	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C752,53	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C754	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C755	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C756	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C757	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C758,59	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C762-66	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C768	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C769	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C770,71	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C772	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C773	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C774	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C775	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C776	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C777	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C778	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C780	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C781	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C782	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C783	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C784	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C785-87	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C790	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C791	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C792	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C801	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C802,03	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C804	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C805	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C806	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C807	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C808,09	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C812-16	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C818	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C819	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C820,21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C822	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C823	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C824	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C825	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C826	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C827	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C828	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C830	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C831	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C832	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C833	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C834	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C835-37	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C840	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C841	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C842	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C851-60	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	10	
C881-96	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	16	
C901-03	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C905-17	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	13	
C919	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C920	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C921	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C922-27	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C928	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C929	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C930,31	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C932	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C934	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C935	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C936	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C937	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C938	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C939	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C940,41	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C942	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C943,44	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C951	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C952-56	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C957	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C958	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C959	ECEV1HNR47Q	E.CAPACITOR CH 50V 0.47U	1	
C960,61	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C962	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C963	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C964,65	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C966	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C967,68	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C973	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C974	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C975	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C976	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C980	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C981,82	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C983	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C984,85	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
D301,02	MA152K	DIODE	2	
D351,52	MA152K	DIODE	2	
D401	MA152WK	DIODE	1	
D551	MA152WK	DIODE	1	
D601	MA335	DIODE	1	
D602	MA152WA	DIODE	1	
D603	MA152K	DIODE	1	
D701,02	MA152K	DIODE	2	
D751,52	MA152K	DIODE	2	
D801,02	MA152K	DIODE	2	
D901	MA152K	DIODE	1	
FL101	VLF1016A223	FILTER	1	
FL103	VLF1016A223	FILTER	1	
FL301	VLF1294	FILTER	1	
FL351	VLF1016A223	FILTER	1	
FL451	VLF1016A223	FILTER	1	
FL601,02	VLF1016A223	FILTER	2	
FL701	VLF1294	FILTER	1	
FL702	VLF1016A223	FILTER	1	
FL751	VLF1295	FILTER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL801	VLF1295	FILTER	1	
FL851,52	VLF1016A223	FILTER	2	
FL911	VLF1016A223	FILTER	1	
FL951	VLF1294	FILTER	1	
FL981,82	VLF1016A223	FILTER	2	
IC101	AN78N09	IC	1	
IC102	AN78N05	IC	1	
IC103	AN79N09	IC	1	
IC104	AN79N05	IC	1	
IC151-54	MC10H125M	IC	4	
IC156	74F244SJ	IC	1	
IC201	VSI2496	IC	1	
IC204	74F245SJ	IC	1	
IC207,08	UPD71055GB	IC	2	
IC209,10	SN74S1051NS	IC	2	
IC251	VSI2153A	IC	1	
IC252	VSI2154	IC	1	
IC253	T74HCT541AF	IC	1	
IC254	T74HCT374AF	IC	1	
IC255	74F574SJ	IC	1	
IC259	T74HCT374AF	IC	1	
IC301	EL2082CS	IC	1	
IC302	NJM082BM	IC	1	
IC303	DAC10GS	IC	1	
IC351	AD818AR	IC	1	
IC352	NJM084M	IC	1	
IC353	CXD1175AM	IC	1	
IC354,55	NJM78L05UA	IC	2	
IC356	NJM79L05UA	IC	1	
IC401	UPC1862GS	IC	1	
IC402,03	NJM78L05UA	IC	2	
IC404	NJM79L05UA	IC	1	
IC405	AN91A12S	IC	1	
IC406	TC4W53F	IC	1	
IC407	MC74HC00AF	IC	1	
IC450	AD8047AR	IC	1	
IC451	UPD6486GF3BA	IC	1	
IC452,53	UPD42280G3	IC	2	
IC454	NJM78L05UA	IC	1	
IC455	NJM79L05UA	IC	1	
IC458	AD8047AR	IC	1	
IC460	UPD42280G3	IC	1	
IC461	MB40760PF	IC	1	
IC462	VSI2716	IC	1	
IC463	NJM78L05UA	IC	1	
IC501	SN74LS221NS	IC	1	
IC502	MM74HC221AM	IC	1	
IC503	UPD65013BC16	IC	1	
IC504,05	NJM1496M	IC	2	
IC507	MC74HC4053F	IC	1	
IC508	MC74HC04AF	IC	1	
IC509,10	NJM082BM	IC	2	
IC511	NJM78L05UA	IC	1	
IC512	NJM79L05UA	IC	1	
IC517	NJM78L05UA	IC	1	
IC518	NJM79L05UA	IC	1	
IC551	MC14538BF	IC	1	
IC552	AN91A12S	IC	1	
IC553	NJM78L05UA	IC	1	
IC554	NJM79L05UA	IC	1	
IC555	MN53015VZW	IC	1	
IC601	SN74LS221NS	IC	1	
IC602	MC74HC00AF	IC	1	
IC603	NJM082BM	IC	1	
IC604	MC74HC74AF	IC	1	
IC605	TC4S584F	IC	1	
IC606	TC4W53F	IC	1	
IC607	MC74HC244AF	IC	1	
IC608	SN74LS221NS	IC	1	
IC701	MC74HC4053F	IC	1	
IC702	AD848JR	IC	1	
IC703	NJM084M	IC	1	
IC704	CXD1175AM	IC	1	
IC705,06	NJM78L05UA	IC	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC707	NJM79L05UA	IC	1	
IC751	MC74HC4053F	IC	1	
IC752	AD848JR	IC	1	
IC753	NJM084M	IC	1	
IC754	MB40568PF	IC	1	
IC755,56	NJM78L05UA	IC	2	
IC757	NJM79L05UA	IC	1	
IC758	AN78N09	IC	1	
IC759	T74HCT541AF	IC	1	
IC801	MC74HC4053F	IC	1	
IC802	AD848JR	IC	1	
IC803	NJM084M	IC	1	
IC804	MB40568PF	IC	1	
IC805,06	NJM78L05UA	IC	2	
IC807	NJM79L05UA	IC	1	
IC808	AN78N09	IC	1	
IC809	T74HCT541AF	IC	1	
IC851	T160G70-1601	IC	1	
IC852,53	UPD42280G3	IC	2	
IC901-03	74F244SJ	IC	3	
IC904	NJM78L05UA	IC	1	
IC905	AN3296S	IC	1	
IC911	TC7W125FU	IC	1	
IC912	MC68HC68VBI	IC	1	
IC913	NJM78L05UA	IC	1	
IC951	T74HCT374AF	IC	1	
IC952	VSI2497	IC	1	
IC953	TC7W125FU	IC	1	
IC954	MB40768PF	IC	1	
IC955,56	NJM78L05UA	IC	2	
IC957	NJM79L05UA	IC	1	
IC958	AD8047AR	IC	1	
IC959	MC74HC4053F	IC	1	
IC981	T160G41-1437	IC	1	
IC982,83	UPD42280G3	IC	2	
IC984	VSI2679	IC	1	
IC985,86	74F244SJ	IC	2	
L1,L2	VLP0133	COIL	2	
L101,02	VLP0133	COIL	2	
L301-04	VLQ0319K101	COIL 100UH	4	
L351	VLQ0163J101	COIL 100UH	1	
L352	VLQ0319K101	COIL 100UH	1	
L401	VLQ0163J150	COIL 15UH	1	
L402-05	VLQ0319K100	COIL 10UH	4	
L406	VLQ0133J471	COIL 470UH	1	
L407	VLQ0319K101	COIL 100UH	1	
L451	VLQ0319K101	COIL 100UH	1	
L452	VLQ0319K100	COIL 10UH	1	
L454	VLQ0163J270	COIL 27UH	1	
L455	VLQ0163J6R8	COIL 6.8UH	1	
L456	VLQ0163J5R6	COIL 5.6UH	1	
L457	VLQ0319K101	COIL 100UH	1	
L458,59	VLQ0163J2R2	COIL 2.2UH	2	
L501-03	VLQ0319K101	COIL 100UH	3	
L505,06	VLQ0163J680	COIL 68UH	2	
L507	VLQ0319K101	COIL 100UH	1	
L553	VLQ0133J471	COIL 470UH	1	
L601	VLQ0163J3R3	COIL 3.3UH	1	
L651,52	VLQ0319K101	COIL 100UH	2	
L703	VLQ0319K101	COIL 100UH	1	
L704	VLQ0133J821	COIL 820UH	1	
L754	VLQ0133J821	COIL 820UH	1	
L804	VLQ0133J821	COIL 820UH	1	
L911	VLQ0319K101	COIL 100UH	1	
L951	VLQ0163J470	COIL 47UH	1	
P1,P2	VJP3454B096	CONNECTOR (MALE)	2	
Q301	2SB709A-R	TRANSISTOR	1	
Q302,03	2SD601A-R	TRANSISTOR	2	
Q351	2SD601A-R	TRANSISTOR	1	
Q352	2SB709A-R	TRANSISTOR	1	
Q353	2SK198-R	TRANSISTOR	1	
Q401	2SD601A-R	TRANSISTOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q404	2SB709A-R	TRANSISTOR	1	
Q405,06	2SD601A-R	TRANSISTOR	2	
Q452	2SD601A-R	TRANSISTOR	1	
Q454	2SB709A-R	TRANSISTOR	1	
Q455	2SD601A-R	TRANSISTOR	1	
Q501,02	2SD601A-R	TRANSISTOR	2	
Q503	2SB709A-R	TRANSISTOR	1	
Q504,05	2SD601A-R	TRANSISTOR	2	
Q507,08	2SD601A-R	TRANSISTOR	2	
Q509	2SB709A-R	TRANSISTOR	1	
Q510,11	2SD601A-R	TRANSISTOR	2	
Q518	2SD601A-R	TRANSISTOR	1	
Q601	2SC3757-R	TRANSISTOR	1	
Q602,03	2SA1226E34	TRANSISTOR	2	
Q604	2SC3757-R	TRANSISTOR	1	
Q651	2SB709A-R	TRANSISTOR	1	
Q652	2SD601A-R	TRANSISTOR	1	
Q653	2SB709A-R	TRANSISTOR	1	
Q654	2SD601A-R	TRANSISTOR	1	
Q655	XN1213	TRANSISTOR-RESISTOR	1	
Q656	2SB709A-R	TRANSISTOR	1	
Q657	2SD601A-R	TRANSISTOR	1	
Q658	2SC3757-R	TRANSISTOR	1	
Q701	2SD601A-R	TRANSISTOR	1	
Q702	2SB709A-R	TRANSISTOR	1	
Q703	2SD601A-R	TRANSISTOR	1	
Q704	2SB709A-R	TRANSISTOR	1	
Q705	2SK198-R	TRANSISTOR	1	
Q706	2SB709A-R	TRANSISTOR	1	
Q707	2SD601A-R	TRANSISTOR	1	
Q751	2SD601A-R	TRANSISTOR	1	
Q752	2SB709A-R	TRANSISTOR	1	
Q753	2SD601A-R	TRANSISTOR	1	
Q754	2SB709A-R	TRANSISTOR	1	
Q755	2SK198-R	TRANSISTOR	1	
Q756	2SD601A-R	TRANSISTOR	1	
Q801	2SD601A-R	TRANSISTOR	1	
Q802	2SB709A-R	TRANSISTOR	1	
Q803	2SD601A-R	TRANSISTOR	1	
Q804	2SB709A-R	TRANSISTOR	1	
Q805	2SK198-R	TRANSISTOR	1	
Q806	2SD601A-R	TRANSISTOR	1	
Q901,02	2SD601A-R	TRANSISTOR	2	
Q951	2SD601A-R	TRANSISTOR	1	
Q952	2SB709A-R	TRANSISTOR	1	
Q953	2SD601A-R	TRANSISTOR	1	
Q954	2SB709A-R	TRANSISTOR	1	
Q955	2SC3757-R	TRANSISTOR	1	
Q956	2SD601A-R	TRANSISTOR	1	
Q957	2SB709A-R	TRANSISTOR	1	
QR201	MUN2212	TRANSISTOR-RESISTOR	1	
QR701,02	MUN2213	TRANSISTOR-RESISTOR	2	
QR751	MUN2213	TRANSISTOR-RESISTOR	1	
QR801	MUN2213	TRANSISTOR-RESISTOR	1	
R7-34	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	28	
R37-53	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	17	
R56-81	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	26	
R98	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R99	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R101-08	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	8	
R111	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R112	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R113	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R114	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R115	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R116	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R117,18	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R119,20	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	2	
R121	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R122	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R123	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R124	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R125,26	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R127	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R128	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R129	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R130	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R131-33	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R134	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R135	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R151-62	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	12	
R163	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R165,66	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R168,69	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R172	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R173	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R175	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R177-80	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	4	
R181	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R182-91	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	10	
R192	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R193,94	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R201,02	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R208	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R214,15	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R216	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R219,20	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R221	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R222	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R223	ERJ6GEYG564	M.RESISTOR CH 1/10W 560K	1	
R224	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R225	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R226	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R227	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R228	ERJ6GEYG753	M.RESISTOR CH 1/10W 75	1	
R229	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R230	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R231	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R232	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R233	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R251	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R301	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R302	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R303	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R304,05	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	2	
R306,07	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R308	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R309	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R310	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R311	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R312	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R315,16	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	2	
R317	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R318	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R352	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R354	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R355	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R358	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R359	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R360	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R361	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R362	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R363	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R364	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R365	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R366	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R369	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R370	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R371	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R401	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R402	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R403	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R404	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R407	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R412	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R413	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R414	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R415	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R416	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R417	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R418	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R419	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R420	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R421	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R422	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R423,24	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R425	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R426	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R427	ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R431	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R432	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R433	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R436	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R437	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R438-40	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R441	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R452	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R453	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R454	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R455,56	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R457-60	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R463	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R465	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R466	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R468	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R469	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R471	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R473	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R474	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R475	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R480	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R481	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R482	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R484-86	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R492	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R493	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R494	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R495	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R496,97	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R498	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R499	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R500	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R501	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R502	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R503	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R504	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R505,06	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R510,11	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R512	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R513	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R514	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R516	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R517	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R518	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R519	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R520,21	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R522,23	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R524	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R525	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R526	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R527	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R528	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R529	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R530	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R531	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R532	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R533	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R537	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R538	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R539	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R540	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R541	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R542	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R543,44	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R545	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R546,47	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R548,49	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R550	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R558	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R559	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R562	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R565	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R566	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R567-70	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R575	ERDS2TJ392	C.RESISTOR 1/4W 3.9K	1	
R601	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R602	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R603	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R604	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R605	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R606,07	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R608,09	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R610	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R611	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R612,13	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	2	
R614	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R615	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R616	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R617	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R618	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R619	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R620,21	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R622	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R623	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R624	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R625	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R626	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R631	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R651	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R652	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R653	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R657	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R658	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R659	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R660	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R661	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R663	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R664	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R665	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R666	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R667	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R668	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R669	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
R670	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	1	
R671,72	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R701	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R702	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R703	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R704	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R707	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R708	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R711	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R712	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R713	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R714	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R715,16	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R717	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R718	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R719	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R720,21	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	2	
R722	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R723	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R724	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R725	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R726	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R727	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R728	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R729	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R730	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R731	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R732	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R733	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R734	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R735,36	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R751	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R752	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R753	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R754	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R757	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R758	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R761	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R762	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R763,64	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	2	
R765,66	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R767	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R768	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R769	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R770,71	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	2	
R772	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R773	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R774	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R775	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R776	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R777	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R778	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R779	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R780	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R781	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R782	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R783	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R784-91	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R801	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R802	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R803	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R804	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R807	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R808	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R811	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R812	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R813,14	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	2	
R815,16	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R817	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R818	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R819	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R820,21	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	2	
R822	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R823	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R824	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R825	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R826	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R827	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R828	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R829	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R830	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R831	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R832	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R833	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R834-41	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R854-57	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	4	
R858	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R859-68	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	10	
R869	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R872	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R875	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R901-03	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R911-13	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	3	
R914	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R916	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R917,18	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R919	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R920	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R921	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R923	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R948,49	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R950	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R951	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R952	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R953	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R954	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R955	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R956	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R957	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R958	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R959	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R960	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R961	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R962,63	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R965	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R966	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R970	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R973,74	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R975,76	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R977,78	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R979	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R980	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R981	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R982	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R983	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R984	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R985	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R986,87	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R988	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R989	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R990	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R991	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R992	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
VL601	VLQ0415	COIL	1	
VR301	EVMEGSA00B53	V.RESISTOR 5K	1	
VR351	EVMEGSA00B53	V.RESISTOR 5K	1	
VR451	EVMEGSA00B12	V.RESISTOR 100	1	
VR455	EVMEGSA00B52	V.RESISTOR 500	1	
VR501	EVMEGSA00B53	V.RESISTOR 5K	1	
VR502	EVMEGSA00B13	V.RESISTOR 1K	1	
VR505	EVMEGSA00B13	V.RESISTOR 1K	1	
VR507	EVMEGSA00B13	V.RESISTOR 1K	1	
VR510,11	EVMEGSA00B13	V.RESISTOR 1K	2	
VR512	EVMEGSA00B53	V.RESISTOR 5K	1	
VR601	EVMEGSA00B23	V.RESISTOR 2K	1	
VR602	EVMEGSA00B53	V.RESISTOR 5K	1	
VR701	EVMEGSA00B13	V.RESISTOR 1K	1	
VR702	EVMEGSA00B53	V.RESISTOR 5K	1	
VR703	EVMEGSA00B13	V.RESISTOR 1K	1	
VR704	EVMEGSA00B14	V.RESISTOR 10K	1	
VR751	EVMEGSA00B13	V.RESISTOR 1K	1	
VR752	EVMEGSA00B53	V.RESISTOR 5K	1	
VR753	EVMEGSA00B13	V.RESISTOR 1K	1	
VR754	EVMEGSA00B53	V.RESISTOR 5K	1	
VR801	EVMEGSA00B13	V.RESISTOR 1K	1	
VR802	EVMEGSA00B53	V.RESISTOR 5K	1	
VR803	EVMEGSA00B13	V.RESISTOR 1K	1	
VR804	EVMEGSA00B53	V.RESISTOR 5K	1	
VR951	EVMEGSA00B23	V.RESISTOR 2K	1	
VR952	EVMEGSA00B52	V.RESISTOR 500	1	
X402	VSX0330	CRYSTAL OSCILLATOR	1	
X501	VSX0338	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■ E6	VEP83449A	F6 VIDEO IN P.C.BOARD	1	(RTL)FOR AJ-D850E
C51-54	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C55	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C56	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C57	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C58-64	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	7	
C65	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C66	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C67	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C68-70	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C101-08	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
C110	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C111	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C112	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C114	ECCF1H101JC	C.CAPACITOR 50V 100P	1	
C131,32	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C151-59	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9	
C160	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C162	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C201-04	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C212,13	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C215	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C251-54	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	4	
C255-60	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C261	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C262,63	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C264	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C265-68	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C269,70	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C271-76	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	6	
C277	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C278	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C279,80	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C281	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C283	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C284	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C285	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C286	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C287	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C288,89	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C292	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C301,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C303-06	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	4	
C307	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C308-11	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C312	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C313	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C315	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C317-21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C322	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C324-26	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C327	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C328,29	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C330	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C331-33	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C334	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C351-54	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C355-57	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	3	
C358-61	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C363,64	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C365,66	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C368-76	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	9	
C378	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C380	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C381	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C383	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C386,87	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C389	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C390,91	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C392	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C393	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C394	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C395	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C396	ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C397	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C398	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C399	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C400	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C401	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C402	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C403-05	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C406	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C410-13	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C414	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C415,16	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C417	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C418-20	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	3	
C421-23	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C424	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C425	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C426	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C427,28	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C429	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C430	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C431	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C432	ECEV1HNR47Q	E.CAPACITOR CH 50V 0.47U	1	
C433	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C434	ECUX1H561JCN	C.CAPACITOR CH 50V 560P	1	
C435-39	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C442	ECUM1H070DCN	C.CAPACITOR CH 50V 7P	1	
C443	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C451	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C452-55	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	4	
C456-60	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C461-64	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C465	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C466-70	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C471,72	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C473	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C474	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C475	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C476	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C477	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C478-80	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	3	
C481,82	ECUM1H040CCN	C.CAPACITOR CH 50V 4P	2	
C483,84	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C485,86	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C487-90	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	4	
C491,92	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C493-96	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	4	
C497-00	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C501,02	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C503-06	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C510	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C511-15	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C516	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C517	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C518,19	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C520,21	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C524,25	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C526	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C527,28	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C530	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C531-34	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C535	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C536	ECUM1E683KBN	C.CAPACITOR CH 25V 0.063U	1	
C537	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C538	ECEV1HV010Q	E.CAPACITOR CH 50V 1U	1	
C539	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C540	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C541	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C542	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C543	ECUX1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C544	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C545	ECEV1HVR68Q	E.CAPACITOR CH 50V 0.68U	1	
C546	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C551,52	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C553	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C554	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C555,56	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C557	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C558,59	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C560	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C561	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C562	ECUX1H681JCN	C.CAPACITOR CH 50V 680P	1	
C563	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C564	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C565	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C566	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C567	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C568	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C569,70	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C571	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C572	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C573	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C576	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C578	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C579,80	ECEV1HN010Q	E.CAPACITOR CH 50V 1U	2	
C581	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C601,02	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C603,04	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C651	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C652-54	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C655	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C656-58	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C659,60	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C661,62	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C663,64	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C665	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C666	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C667	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C668,69	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C671	ECUM1H010CCN	C.CAPACITOR CH 50V 1P	1	
C672	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C673	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C675	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C676	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C677	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C678	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C679	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C680,81	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C682	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C683-85	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C686	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C687-89	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C701	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C702	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C703-05	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C706	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C707-09	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C710,11	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C712	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C713	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C714	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C715	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C716,17	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C718	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C719	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C720	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C721	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C722	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C725	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C726	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C728	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C729	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C730	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C731	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C732	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C734	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C736	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C738	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C739	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C740-42	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C751	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C752	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C753-55	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C756	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C757-59	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C760,61	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C762	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C763	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C764	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C765	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C766,67	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C768	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C769	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C770	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C771	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C772	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C775	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C776	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C778	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C779	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C780	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C781	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C782	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C784	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C786	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C788	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C789	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C790	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C792,93	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C801-10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	10	
C853-55	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C856	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C857	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C858-73	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	16	
C901,02	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C903,04	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	2	
C905,06	ECUX1H223KBN	C.CAPACITOR CH 50V 0.22U	2	
C907	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C908,09	ECUM1H050CCN	C.CAPACITOR CH 50V 5P	2	
C910	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C911	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C912,13	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C957,58	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C959	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C960	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C961,62	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C963	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C965	ECEV1EV4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C966	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C967	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C971,72	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C973	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C974,75	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C981-92	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	12	
D251,52	MA152K	DIODE	2	
D253	MA152WK	DIODE	1	
D301,02	MA152K	DIODE	2	
D451	MA152K	DIODE	1	
D501	MA152WK	DIODE	1	
D502	MA152K	DIODE	1	
D551	MA152K	DIODE	1	
D552	MA335	DIODE	1	
D553	MA152WA	DIODE	1	
D651,52	MA152K	DIODE	2	
D701,02	MA152K	DIODE	2	
D751,52	MA152K	DIODE	2	
FL51,52	VLF1016A223	FILTER	2	
FL251	VLF1294	FILTER	1	
FL301	VLF1016A223	FILTER	1	
FL351	VLF1016A223	FILTER	1	
FL551,52	VLF1016A223	FILTER	2	
FL651	VLF1294	FILTER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL652	VLF1016A223	FILTER	1	
FL701	VLF1295	FILTER	1	
FL751	VLF1295	FILTER	1	
FL801,02	VLF1016A223	FILTER	2	
FL851,52	VLF1016A223	FILTER	2	
FL901	VLF1016A223	FILTER	1	
FL951	VLF1015	FILTER	1	
FL981,82	VLF1016A223	FILTER	2	
IC51	AN78N09	IC	1	
IC52	AN78N05	IC	1	
IC53	AN79N09	IC	1	
IC54	AN79N05	IC	1	
IC101-03	MC10H125M	IC	3	
IC107	MC10H125M	IC	1	
IC110	74F244SJ	IC	1	
IC151,52	SN74S1051NS	IC	2	
IC153	EPM7128STC15	IC	1	
IC156	74F245SJ	IC	1	
IC164,65	UPD71055GB	IC	2	
IC201	EPM7128STC15	IC	1	
IC203	T74HCT541AF	IC	1	
IC204	T74HCT374AF	IC	1	
IC210	T74HCT374AF	IC	1	
IC251	DAC10GS	IC	1	
IC252	NJM082BM	IC	1	
IC254	EL2082CS	IC	1	
IC255	NJM78L05UA	IC	1	
IC256	NJM79L05UA	IC	1	
IC257	TC4W53F	IC	1	
IC258	AN91A12S	IC	1	
IC259	MC74HC00AF	IC	1	
IC301	NJM79L05UA	IC	1	
IC302	NJM78L05UA	IC	1	
IC303	NJM084M	IC	1	
IC304	AD818AR	IC	1	
IC308	CXD1175AM	IC	1	
IC309	NJM78L05UA	IC	1	
IC351,52	NJM78L05UA	IC	2	
IC353	NJM79L05UA	IC	1	
IC354	CXD2105AQ	IC	1	
IC355	AD8047AR	IC	1	
IC356	MC74HC4053F	IC	1	
IC357,58	AD8047AR	IC	2	
IC359	MC74HC4053F	IC	1	
IC401	SN74LS221NS	IC	1	
IC402,03	MM74HC221AM	IC	2	
IC404	MC74HC04AF	IC	1	
IC406	NJM78L05UA	IC	1	
IC407	NJM79L05UA	IC	1	
IC410	NJM082BM	IC	1	
IC414	MC74HC4053F	IC	1	
IC418	NJM082BM	IC	1	
IC419	MC74HC4053F	IC	1	
IC423	NJM082BM	IC	1	
IC428	UPD65013BC16	IC	1	
IC451	NJM319M	IC	1	
IC452,53	NJM1496M	IC	2	
IC455,56	MC74HC4053F	IC	2	
IC459	NJM78L05UA	IC	1	
IC460	NJM79L05UA	IC	1	
IC501	NJM78L05UA	IC	1	
IC502	NJM79L05UA	IC	1	
IC503	AN91A12S	IC	1	
IC504	MC14538BF	IC	1	
IC505	AN3296S	IC	1	
IC506	NJM78L05UA	IC	1	
IC507	MN53015VZW	IC	1	
IC551	MC74HC00AF	IC	1	
IC552	TC4S584F	IC	1	
IC554	MC74HC74AF	IC	1	
IC557	SN74LS221NS	IC	1	
IC560	NJM082BM	IC	1	
IC561	TC4W53F	IC	1	
IC562	SN74LS221NS	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC567	MC74HC244AF	IC	1	
IC651	NJM78L05UA	IC	1	
IC652	NJM79L05UA	IC	1	
IC653	MC74HC4053F	IC	1	
IC655	NJM084M	IC	1	
IC656	AD848JR	IC	1	
IC660	CXD1175AM	IC	1	
IC661	NJM78L05UA	IC	1	
IC701	NJM78L05UA	IC	1	
IC702	NJM79L05UA	IC	1	
IC703	MC74HC4053F	IC	1	
IC705	NJM084M	IC	1	
IC706	AD848JR	IC	1	
IC710	MB40568PF	IC	1	
IC711	NJM78L05UA	IC	1	
IC712	AN78N09	IC	1	
IC713	T74HCT541AF	IC	1	
IC751	NJM78L05UA	IC	1	
IC752	NJM79L05UA	IC	1	
IC753	MC74HC4053F	IC	1	
IC755	NJM084M	IC	1	
IC756	AD848JR	IC	1	
IC760	MB40568PF	IC	1	
IC761	NJM78L05UA	IC	1	
IC762	AN78N09	IC	1	
IC763	T74HCT541AF	IC	1	
IC801	UPD42280G3	IC	1	
IC802	T160G70-1601	IC	1	
IC803	UPD42280G3	IC	1	
IC853	74F244SJ	IC	1	
IC854	CG25123-5106	IC	1	
IC855,56	CY7C19920ZC	IC	2	
IC857,58	74F244SJ	IC	2	
IC859,60	UPD42280G3	IC	2	
IC861,62	74F244SJ	IC	2	
IC901	NJM78L05UA	IC	1	
IC902	CF72417	IC	1	
IC903	TC7W125FU	IC	1	
IC954	MB40768PF	IC	1	
IC955,56	NJM78L05UA	IC	2	
IC957	NJM79L05UA	IC	1	
IC958	AD8047AR	IC	1	
IC959	MC74HC4053F	IC	1	
IC981	T160G70-1601	IC	1	
IC982,83	UPD42280G3	IC	2	
IC985,86	74F244SJ	IC	2	
L1,L2	VLP0133	COIL	2	
L51,52	VLP0133	COIL	2	
L251-54	VLQ0319K101	COIL 100UH	4	
L255	VLQ0133J471	COIL 470UH	1	
L256	VLQ0319K101	COIL 100UH	1	
L301,02	VLQ0319K101	COIL 100UH	2	
L351,52	VLQ0319K101	COIL 100UH	2	
L354	VLQ0163J270	COIL 27UH	1	
L355	VLQ0163J6R8	COIL 6.8UH	1	
L356	VLQ0163J5R6	COIL 5.6UH	1	
L401	VLQ0319K101	COIL 100UH	1	
L451-55	VLQ0319K101	COIL 100UH	5	
L456	VLQ0163J470	COIL 47UH	1	
L457,58	VLQ0163J560	COIL 56UH	2	
L501	VLQ0133J391	COIL 390UH	1	
L551	VLQ0163J3R3	COIL 3.3UH	1	
L601,02	VLQ0319K101	COIL 100UH	2	
L651	VLQ0133J821	COIL 820UH	1	
L652	VLQ0319K101	COIL 100UH	1	
L701	VLQ0133J821	COIL 820UH	1	
L751	VLQ0133J821	COIL 820UH	1	
L901	VLQ0319K101	COIL 100UH	1	
P1,P2	VJP3454B096	CONNECTOR (MALE)	2	
P41	VJP1246T	CONNECTOR (MALE) 6P	1	
Q251	2SB709A-R	TRANSISTOR	1	
Q252,53	2SD601A-R	TRANSISTOR	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q301	2SB709A-R	TRANSISTOR	1	
Q302	2SD601A-R	TRANSISTOR	1	
Q303	2SK198-R	TRANSISTOR	1	
Q351	2SD601A-R	TRANSISTOR	1	
Q352	2SB709A-R	TRANSISTOR	1	
Q401,02	2SD601A-R	TRANSISTOR	2	
Q451-54	2SD601A-R	TRANSISTOR	4	
Q455-58	2SB709A-R	TRANSISTOR	4	
Q459-67	2SD601A-R	TRANSISTOR	9	
Q501,02	2SD601A-R	TRANSISTOR	2	
Q551	2SC3757-R	TRANSISTOR	1	
Q552,53	2SA1226E34	TRANSISTOR	2	
Q554	2SC3757-R	TRANSISTOR	1	
Q601-03	2SB709A-R	TRANSISTOR	3	
Q606-08	2SD601A-R	TRANSISTOR	3	
Q651	2SD601A-R	TRANSISTOR	1	
Q652-54	2SB709A-R	TRANSISTOR	3	
Q655	2SD601A-R	TRANSISTOR	1	
Q656	2SK198-R	TRANSISTOR	1	
Q657	2SD601A-R	TRANSISTOR	1	
Q701	2SD601A-R	TRANSISTOR	1	
Q702	2SB709A-R	TRANSISTOR	1	
Q703	2SD601A-R	TRANSISTOR	1	
Q704	2SB709A-R	TRANSISTOR	1	
Q705	2SD601A-R	TRANSISTOR	1	
Q706	2SK198-R	TRANSISTOR	1	
Q751	2SD601A-R	TRANSISTOR	1	
Q752	2SB709A-R	TRANSISTOR	1	
Q753	2SD601A-R	TRANSISTOR	1	
Q754	2SB709A-R	TRANSISTOR	1	
Q755	2SD601A-R	TRANSISTOR	1	
Q756	2SK198-R	TRANSISTOR	1	
Q951	2SD601A-R	TRANSISTOR	1	
Q952	2SB709A-R	TRANSISTOR	1	
Q953	2SD601A-R	TRANSISTOR	1	
Q954	2SB709A-R	TRANSISTOR	1	
QR151	MUN2212	TRANSISTOR-RESISTOR	1	
QR501	MUN2212	TRANSISTOR-RESISTOR	1	
R2-R8	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	7	
R10-22	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	13	
R24-75	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	52	
R101-12	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	12	
R113	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R115,16	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R118,19	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R120	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R131	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R132	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R133	ERJ6GEYG564	M.RESISTOR CH 1/10W 560K	1	
R134	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R135	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R136	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R137	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R138	ERJ6GEYG753	M.RESISTOR CH 1/10W 75	1	
R139	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R140	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R141	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R142	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R143	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R146,47	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R152-54	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	3	
R159,60	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R163,64	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R165-68	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R170	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R172	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R173	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R175,76	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R177-79	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	3	
R180	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R181-91	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	11	
R192	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R193,94	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R217-20	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
R251	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R252	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R253	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R254	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R255	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R256	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R257	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R258,59	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	2	
R260	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R261	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R262,63	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R264	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R265	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R266	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R269	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R270	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R271-73	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R274	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R275	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R276	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R277	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R301	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R302	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R303	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R304	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R305	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R307	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R308	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R309,10	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R311	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R313,14	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R316,17	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R318	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R319	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R353	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R354	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R355	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R356	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R357	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	1	
R358	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R359	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R360	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R362	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	1	
R363	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R365	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R366	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R367	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R368	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R369	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R370	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R371	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R373	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R375	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R376	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R377	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R379	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R380	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R381,82	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R384	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R385	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R386	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R387	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R390	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R393,94	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R395	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R401	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R402	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R403	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R404	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R405	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R406	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R407	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R408	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R409	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R410-12	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R413	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R414	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R415	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R416	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R417	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R418	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R419	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R420,21	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R422	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R423,24	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R426,27	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R428	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R429	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R430	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R431	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R432	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R433,34	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R435,36	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R441,42	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R451	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R452	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R453	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R454	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R455	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R456	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R457	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R458,59	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R460,61	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R462	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R463	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R464,65	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R466	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R467	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R468,69	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	2	
R470	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R471-74	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	4	
R475-78	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R479	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R480,81	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R482,83	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R484,85	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R486,87	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R488-91	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	4	
R492-99	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	8	
R500-03	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R504-07	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	4	
R508-11	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R512-15	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R516-19	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	4	
R520-23	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
R526	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R527	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R528	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R530	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R531	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R534	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R535	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R536-38	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R539	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R541	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R542	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R546	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R547	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R548	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R551	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R552	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R553	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R554	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R555	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R556	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R557,58	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R559,60	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R561	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R562,63	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R564	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R565	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R566	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R567	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R571	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R572	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R573,74	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R575	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R576	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R577	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R578	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R579	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R581	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R582	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R583	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R586	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R601-03	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R604-06	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	3	
R607	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R609,10	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R616-18	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	3	
R651	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R652	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R653	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R654	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R655	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R656	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R657	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R658	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R659	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R660	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R661	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R662	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R664,65	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R666	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R667	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R668,69	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R670	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R671	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R672	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R673	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R674	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R675	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R676	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R680	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R681	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R682	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R683	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R684	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R701	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R702	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R703	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R704	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R705,06	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R707,08	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R709	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R710	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R711	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R712	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R713	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R714	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R715	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R717	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R718	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R719	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R720	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R721,22	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R723	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R724	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R725	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R726	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R727,28	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	2	
R729	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R731-38	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R751	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R752	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R753	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R754	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R755,56	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R757,58	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R759	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R760	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R761	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R762	ERJ6GEYG394	M.RESISTOR CH 1/10W 390K	1	
R763	ERJ6GEYJ274	M.RESISTOR CH 1/10W 270K	1	
R764	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R765	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R767	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R768	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R769	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R770	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R771,72	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R773	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R774	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R775	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R776	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R777,78	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	2	
R779	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R781-88	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R801	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R803	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R806	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R808-10	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	3	
R811	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R812-22	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	11	
R823	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R851	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R852	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R853	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R872,73	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R901	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R903	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R904,05	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R906	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R961	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R962	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R963	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R964	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R965	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R966	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R967	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R968	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R969,70	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R971	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R972	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R973	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R974	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R985	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
TG1-G6	VJR0646	TEST POINT	6	
TP301	VJR0646	TEST POINT	1	
TP401	VJR0646	TEST POINT	1	
TP402	EYF6CU	TEST POINT	1	
TP403	VJR0646	TEST POINT	1	
TP405	VJR0646	TEST POINT	1	
TP451	VJR0646	TEST POINT	1	
TP551-53	VJR0646	TEST POINT	3	
TP651	VJR0646	TEST POINT	1	
TP701	VJR0646	TEST POINT	1	
TP751	VJR0646	TEST POINT	1	
TP951	EYF6CU	TEST POINT	1	
TP952	VJR0646	TEST POINT	1	
VL551	VLQ0415	COIL	1	
VR251	EVMEGSA00B53	V.RESISTOR 5K	1	
VR301	EVMEGSA00B53	V.RESISTOR 5K	1	
VR351	EVMEGSA00B12	V.RESISTOR 100	1	
VR352	VRV0112B201	V.RESISTOR 200	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR353,54	EVMEGSA00B52	V.RESISTOR 500	2	
VR406,07	EVMEGSA00B13	V.RESISTOR 1K	2	
VR408-10	EVMEGSA00B53	V.RESISTOR 5K	3	
VR459-66	EVMEGSA00B13	V.RESISTOR 1K	8	
VR551	EVMEGSA00B23	V.RESISTOR 2K	1	
VR552	EVMEGSA00B53	V.RESISTOR 5K	1	
VR651	EVMEGSA00B13	V.RESISTOR 1K	1	
VR652	EVMEGSA00B53	V.RESISTOR 5K	1	
VR701,02	EVMEGSA00B13	V.RESISTOR 1K	2	
VR703	EVMEGSA00B53	V.RESISTOR 5K	1	
VR751,52	EVMEGSA00B13	V.RESISTOR 1K	2	
VR753	EVMEGSA00B53	V.RESISTOR 5K	1	
VR952	EVMEGSA00B52	V.RESISTOR 500	1	
X401	VSX0270	CRYSTAL OSCILLATOR	1	
X901	VSX0949	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E7	VEP84326A	F7 A PROCESS P.C.BOARD	1	(RTL)
C1	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C2	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3,C4	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C5	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6,C7	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C8	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C9	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C10	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C15,16	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C20-31	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	12	
C32	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C33-35	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C110-21	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	12	
C122	ECKF1H182KB	C.CAPACITOR 50V 1800P	1	
C190-94	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C220,21	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C222,23	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C224,25	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C228,29	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C231	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C232-34	ECEV1HV0R1Q	E.CAPACITOR CH 50V 0.1U	3	
C235	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C236	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C237	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C238	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C239,40	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C340-44	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C345-47	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C430	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C434	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C435	ECUX1H122KBN	C.CAPACITOR CH 50V 1200P	1	
C438	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C439,40	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C442-45	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C447-49	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C530	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C531	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C532,33	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C534	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C535-41	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	7	
C651-56	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	6	
C657	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C658	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C659	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C750-52	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C800	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C820	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C821	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C822	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C823	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C824,25	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C826	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C827	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C829	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C832,33	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C834	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C835,36	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C837	ECEV1HN4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C838	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C839	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C840-42	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C843	ECEV1HN4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C920-27	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	8	
C930	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C970	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C971	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C972	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C973,74	ECUX1H221KBN	C.CAPACITOR CH 50V 220P	2	
D820,21	MA152A	DIODE	2	
D822,23	MA157	DIODE	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
FL1	VLF0576	FILTER	1	
FL431	VLF0941C223	FILTER	1	
IC15	MC10H125M	IC	1	
IC16	MC74HC541AF	IC	1	
IC17	MC74HC574AF	IC	1	
IC18	MC74HC541AF	IC	1	
IC19	MC74HC153F	IC	1	
IC20	T74HCT541AF	IC	1	
IC21	MC74HC08AF	IC	1	
IC22	TVHT244F	IC	1	
IC23	MC74HC74AF	IC	1	
IC24-26	MC74HC541AF	IC	3	
IC27	MC10H124M	IC	1	
IC110,11	SN74S1051NS	IC	2	
IC112	74F541SJ	IC	1	
IC113	74F245SJ	IC	1	
IC114,15	74F541SJ	IC	2	
IC116,17	74AC138SJ	IC	2	
IC118,19	UPD71055GB	IC	2	
IC120	74F32SJ	IC	1	
IC121	74AC04SJ	IC	1	
IC190	MC74HC540AF	IC	1	
IC191-93	MC74HC541AF	IC	3	
IC194	MC74HC04AF	IC	1	
IC220	74AC04SJ	IC	1	
IC221	MC74HC74AF	IC	1	
IC224,25	NJM78L05UA	IC	2	
IC226,27	MC4044M	IC	2	
IC229	NJM319M	IC	1	
IC340	EPF10K20TC-4	IC	1	
IC341	S80726ANDP	IC	1	
IC342	VSI2997B	IC	1	
IC343,44	UPD42280G3	IC	2	
IC430	XC62FP3302P	IC	1	
IC434	M5256DVP10VL	IC	1	
IC435	UPD65845G068	IC	1	
IC436	M5256DVP10VL	IC	1	
IC530	MC74HC157AF	IC	1	
IC531	AD1893JST	IC	1	
IC532	K6256DLG7L	IC	1	
IC533	T16GH7AF1216	IC	1	
IC534	K6256DLG7L	IC	1	
IC535	MC74HC74AF	IC	1	
IC536	MC74HC157AF	IC	1	
IC651	EPF10K20TC-4	IC	1	
IC652	M5M417800DJ6	IC	1	
IC653	VSI2999A	IC	1	
IC654	S80726ANDP	IC	1	
IC750	MB621926	IC	1	
IC751	MB814400C70L	IC	1	
IC800	MC74HC157AF	IC	1	
IC820	74AC04SJ	IC	1	
IC821	MC74HC08AF	IC	1	
IC822	MC74HC74AF	IC	1	
IC823	DS9637ACN	IC	1	
IC825	NJM78L05UA	IC	1	
IC826	SN75158P	IC	1	
IC920	MC74HC08AF	IC	1	
IC921	MB87D136APFV	IC	1	
IC924	MC74HC74AF	IC	1	
IC970	TL7705CPSB	IC	1	
IS342	VJS3096308	CONNECTOR (FEMALE)	1	
IS653	VJS3096308	CONNECTOR (FEMALE)	1	
L1,L2	VLP0133	COIL	2	
P1,P2	VJP3454B096	CONNECTOR (MALE)	2	
Q820	2SJ163-Q	TRANSISTOR	1	
Q821-23	2SC2480	TRANSISTOR	3	
R15,16	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R17,18	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R20	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R21	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R22	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R23-32	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	10	
R34-36	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R37-39	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	3	
R41,42	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R44-50	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	7	
R51	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R55	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R56	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R57	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R60,61	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R62-64	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	3	
R65	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R66-73	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	8	
R74	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R75-83	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	9	
R84,85	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R86	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R92-94	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R96	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R103	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R104-06	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R107-09	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R110-32	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	23	
R133-36	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	4	
R137-40	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R141-46	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	6	
R147-50	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R151-55	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	5	
R156	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R157	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R158	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R159	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R161-64	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R165	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R167,68	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R190	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R193-96	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	4	
R199	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R220,21	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R222	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R223	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R224,25	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R226,27	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R228,29	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R232,33	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R236	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R237	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R239	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R240	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R241	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R242	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R243	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R244	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R245	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R246	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R320,21	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R340,41	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R342-45	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R348-50	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R351-56	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	6	
R357	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R359-61	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R395	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R397	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R399	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R401	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R431	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R434	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R437-39	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R446	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R450	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R452	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R453-56	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R458	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R459,60	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R462	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R531	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R532	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R533	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R534	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R536	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R537	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R538,39	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R540-43	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R544	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R546	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R548	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R549	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R550	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R554	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R555,56	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R557	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R558	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R560	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R561	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R564	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R577-80	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R581-85	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R586	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R601	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R603,04	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R605	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R608	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R609	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R610	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R655	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R658	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R660	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R664	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R666,67	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R668-71	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	4	
R672-75	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R676-83	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	8	
R684-87	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R690	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R691-95	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	5	
R696-98	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R700	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R702-04	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	3	
R721	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R723-26	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R728	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R752	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R754	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R755,56	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	2	
R758	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R760	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R762,63	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R765	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R767	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R769	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R771	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R773	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R775	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R777	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R779	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R800	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R803	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R820	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R822	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R823,24	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R825	ERJ6RBD111	M.RESISTOR CH 1/10W 110	1	
R826	ERJ6GEYG822	M.RESISTOR CH 1/10W 8.2K	1	
R829	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R830	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R833	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R838	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R840	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R842	ERJ6RED560	M.RESISTOR CH 1/10W 56	1	
R843	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R847	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R848	ERJ6RED560	M.RESISTOR CH 1/10W 56	1	
R895,96	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R900	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R921	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R924	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R926-28	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R930	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R932,33	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R938	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R942	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R944	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R948	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R950	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R953	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R955	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R970	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R972	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
SW751	VSS0367-08B	SWITCH	1	
T820,21	VLT0890	TRANSFORMER	2	
TG1-G6	VJR0646	TEST POINT	6	
TG260	VJR0646	TEST POINT	1	
TP15,16	EYF6CU	TEST POINT	2	
TP190,91	VJR0646	TEST POINT	2	
TP193,94	VJR0646	TEST POINT	2	
TP220-23	VJR0646	TEST POINT	4	
TP340-49	EYF6CU	TEST POINT	10	
VR260,61	EVMEGSA00B13	V.RESISTOR 1K	2	
X220	VSX0967	CRYSTAL OSCILLATOR	1	
X221	VSX0968	CRYSTAL OSCILLATOR	1	
X530	VSX0519	CRYSTAL OSCILLATOR	1	
X820	VSX0968	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■E8	VEP84301B	F8 A AD/DA P.C.BOARD	1	(RTL)
C4001,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4003	ECEA1HGE330	E.CAPACITOR 50V 33U	1	
C4004	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4005	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4006	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4007	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4009	ECEA1HGE330	E.CAPACITOR 50V 33U	1	
C4011	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C4012	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4013	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4014	ECHU1C472G	P.CAPACITOR 16V 4700P	1	
C4015	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C4016,17	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4018	ECUX1H561JCN	C.CAPACITOR CH 50V 560P	1	
C4019	ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	1	
C4020	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4021	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4041,42	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4043	ECEA1HGE330	E.CAPACITOR 50V 33U	1	
C4044,45	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4046,47	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C4049	ECEA1HGE330	E.CAPACITOR 50V 33U	1	
C4051	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C4052	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4053	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4054	ECHU1C472G	P.CAPACITOR 16V 4700P	1	
C4055	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C4056,57	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4058	ECUX1H561JCN	C.CAPACITOR CH 50V 560P	1	
C4059	ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	1	
C4060	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4061	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4201,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4203	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4204	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4205	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4206	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4207	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4208,09	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C4211	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C4212	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4213	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C4214	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C4215	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4216	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C4217,18	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C4219,20	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	2	
C4221,22	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C4223-26	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C4227	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4228	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4301	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4302	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4303	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4304	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4305	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4306	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4307	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4308	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4309	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4310	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4311-13	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4314	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4315	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4316	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4317,18	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	2	
C4319,20	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4321,22	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C4323,24	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4325	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4401	ECHU1C472G	P.CAPACITOR 16V 4700P	1	
C4402,03	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4404	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4405,06	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4407,08	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C4409,10	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4411	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4412	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C4413	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4414,15	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C4416	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C4417	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4418	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4419,20	ECEA1CGE221	E.CAPACITOR 16V 220U	2	
C4421	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4422	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4423	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4424	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4425,26	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C4427,28	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4429,30	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C4476	ECHU1C472G	P.CAPACITOR 16V 4700P	1	
C4477	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4478,79	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4480	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C4481	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4482	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C4483	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4484,85	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C4486	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4487	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4488,89	ECEA1CGE221	E.CAPACITOR 16V 220U	2	
C4490,91	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C4492,93	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4494,95	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C4496,97	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4701-04	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C4705	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4706-10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	5	
C4711	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4712-14	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4715-18	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	4	
C4720	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4721	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4722	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4723,24	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4725	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4726	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4727	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4728	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4729,30	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	2	
C4731,32	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C4733-36	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C4737,38	ECHU1C472G	P.CAPACITOR 16V 4700P	2	
C4739,40	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	2	
C4745	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4751	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4752	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4754,55	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C4756	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C4757	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4758	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4759,60	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4761,62	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4763	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C4764	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C4765,66	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4767-70	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	4	
C4771,72	ECEA1CGE221	E.CAPACITOR 16V 220U	2	
C4773	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4774	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4775,76	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C4777	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4778	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4779,80	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4831	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C4832	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4833-35	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4836,37	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4838	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C4839	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4840	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C4841	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4842-45	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	4	
C4846,47	ECEA1CGE221	E.CAPACITOR 16V 220U	2	
C4848	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4849	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4850	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4851	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4852,53	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	2	
C4854,55	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C4901,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4903,04	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	2	
C4905	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4906	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4907	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4908	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4931	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4932	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4933-36	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C4937-39	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C4940	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D4001,02	MA157	DIODE	2	
D4041,42	MA157	DIODE	2	
D4401,02	MA157	DIODE	2	
D4476,77	MA157	DIODE	2	
D4751	MA157	DIODE	1	
D4752,53	MA152WK	DIODE	2	
D4754,55	MA157	DIODE	2	
D4831,32	MA157	DIODE	2	
FL4931	VLF0941C223	FILTER	1	
IC4001	NJM4580ED	IC	1	
IC4002	MC14052BF	IC	1	
IC4003	NJM79L09UA	IC	1	
IC4004	NJM78L09UA	IC	1	
IC4005	NJM4580ED	IC	1	
IC4006	AD7945BR	IC	1	
IC4007,08	NJM4580ED	IC	2	
IC4009	MC14052BF	IC	1	
IC4041,42	NJM4580ED	IC	2	
IC4043	NJM78L09UA	IC	1	
IC4044	NJM79L09UA	IC	1	
IC4045,46	NJM4580ED	IC	2	
IC4047	MC14052BF	IC	1	
IC4048	AD7945BR	IC	1	
IC4049	MC14052BF	IC	1	
IC4201	MC74HC541AF	IC	1	
IC4202	NJM78L05UA	IC	1	
IC4203,04	NJM2100MD	IC	2	
IC4205	AK5340VS	IC	1	
IC4301	NJM78L05UA	IC	1	
IC4302	AK4320VM	IC	1	
IC4303,04	NJM4580ED	IC	2	
IC4305	MC74HC157AF	IC	1	
IC4306	TC7W74F	IC	1	
IC4307,08	TC4W53F	IC	2	
IC4401	NJM4580ED	IC	1	
IC4402	NJM79L05UA	IC	1	
IC4403	NJM78L05UA	IC	1	
IC4404	NJM4580ED	IC	1	
IC4405	NJM2043MD	IC	1	
IC4406	MC14052BF	IC	1	
IC4407,08	AQV212SX	IC	2	
IC4476,77	NJM4580ED	IC	2	
IC4478	NJM2043MD	IC	1	
IC4479	MC14052BF	IC	1	
IC4480,81	AQV212SX	IC	2	
IC4701	NJM78L05UA	IC	1	
IC4702	AK4320VM	IC	1	
IC4703,04	NJM4580ED	IC	2	
IC4707	NJM78L09UA	IC	1	
IC4708,09	NJM79L09UA	IC	2	
IC4710	NJM78L09UA	IC	1	
IC4711	MC74HC541AF	IC	1	
IC4712,13	TC4W53F	IC	2	
IC4751,52	NJM4580ED	IC	2	
IC4753	NJM2043MD	IC	1	
IC4754	AD7945BR	IC	1	
IC4755	MC14053BF	IC	1	
IC4756	MC14052BF	IC	1	
IC4757,58	AQV212SX	IC	2	
IC4831,32	NJM4580ED	IC	2	
IC4833	NJM2043MD	IC	1	
IC4834	AD7945BR	IC	1	
IC4835	MC14053BF	IC	1	
IC4836	MC14052BF	IC	1	
IC4837,38	AQV212SX	IC	2	
IC4901	NJM4556AM	IC	1	
IC4931,32	SN74S1051NS	IC	2	
IC4933	74F245SJ	IC	1	
IC4934	74F541SJ	IC	1	
IC4935	74AC139SJ	IC	1	
IC4936	74F11SJ	IC	1	
IC4937	TC7S04F	IC	1	
IC4938-40	UPD71055GB	IC	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L4201	VLQ0163J100	COIL 10UH	1	
L4301	VLQ0163J100	COIL 10UH	1	
L4701	VLQ0163J100	COIL 10UH	1	
P4001,02	VJP3454B096	CONNECTOR (MALE)	2	
Q4003	2SD1328	TRANSISTOR	1	
Q4041	2SD1328	TRANSISTOR	1	
Q4301,02	2SK198-R	TRANSISTOR	2	
Q4401	2SD1328	TRANSISTOR	1	
Q4402	2SB1322A-R	TRANSISTOR	1	
Q4403	2SD1994A-R	TRANSISTOR	1	
Q4404	2SB1322A-R	TRANSISTOR	1	
Q4405	2SD1994A-R	TRANSISTOR	1	
Q4406	2SB710A-R	TRANSISTOR	1	
Q4407	2SD602A-R	TRANSISTOR	1	
Q4476	2SD1328	TRANSISTOR	1	
Q4477	2SB1322A-R	TRANSISTOR	1	
Q4478	2SD1994A-R	TRANSISTOR	1	
Q4479	2SB1322A-R	TRANSISTOR	1	
Q4480	2SD1994A-R	TRANSISTOR	1	
Q4481	2SB710A-R	TRANSISTOR	1	
Q4482	2SD602A-R	TRANSISTOR	1	
Q4701,02	2SD1328	TRANSISTOR	2	
Q4703,04	2SK198-R	TRANSISTOR	2	
Q4751-54	2SB710A-R	TRANSISTOR	4	
Q4755	2SD1994A-R	TRANSISTOR	1	
Q4756	2SB1322A-R	TRANSISTOR	1	
Q4757	2SD1994A-R	TRANSISTOR	1	
Q4758	2SB1322A-R	TRANSISTOR	1	
Q4759	2SD602A-R	TRANSISTOR	1	
Q4760	2SB710A-R	TRANSISTOR	1	
Q4831	2SD1994A-R	TRANSISTOR	1	
Q4832	2SB1322A-R	TRANSISTOR	1	
Q4833	2SD1994A-R	TRANSISTOR	1	
Q4834	2SB1322A-R	TRANSISTOR	1	
Q4835	2SD602A-R	TRANSISTOR	1	
Q4836	2SB710A-R	TRANSISTOR	1	
Q4901-04	2SD1328	TRANSISTOR	4	
QR4001	UN2213	TRANSISTOR-RESISTOR	1	
QR4002	UN2113	TRANSISTOR-RESISTOR	1	
QR4041	UN2213	TRANSISTOR-RESISTOR	1	
QR4042	UN2113	TRANSISTOR-RESISTOR	1	
QR4301	UN2213	TRANSISTOR-RESISTOR	1	
QR4302	UN2113	TRANSISTOR-RESISTOR	1	
QR4303	UN2213	TRANSISTOR-RESISTOR	1	
QR4401	UN2213	TRANSISTOR-RESISTOR	1	
QR4402	UN2113	TRANSISTOR-RESISTOR	1	
QR4476	UN2213	TRANSISTOR-RESISTOR	1	
QR4477	UN2113	TRANSISTOR-RESISTOR	1	
QR4701-03	UN2213	TRANSISTOR-RESISTOR	3	
QR4704,05	UN2113	TRANSISTOR-RESISTOR	2	
QR4751,52	UN2213	TRANSISTOR-RESISTOR	2	
R4001	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4002	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R4003	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R4004	ERJ12YJ621	M.RESISTOR CH 1/2W 620	1	
R4005	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4006	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4007,08	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	2	
R4009	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4010	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R4011	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R4012	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4013,14	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	2	
R4015	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4016,17	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	2	
R4018	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4019	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4020	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4021	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4022	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4023	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4024	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4025	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4026,27	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4028	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4029	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4030	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4031,32	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	2	
R4033	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4034	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R4035	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4037	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4041	ERJ12YJ621	M.RESISTOR CH 1/2W 620	1	
R4042	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R4043	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R4044	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4045	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4046,47	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	2	
R4048,49	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	2	
R4050	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4051	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R4052	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R4053-56	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4057	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4058	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4059	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R4060	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4061	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4062	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4063	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4064	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4065	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4066	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4067	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4068,69	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4070	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4071	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4072-74	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	3	
R4075	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4077	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4201	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R4202	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4203	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4204	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R4205	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4206	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4207	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4208	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4209	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4210	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4211,12	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4214-18	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	5	
R4219,20	ERJ6RBD331	M.RESISTOR CH 1/10W 330	2	
R4221	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4222,23	ERJ6RBD331	M.RESISTOR CH 1/10W 330	2	
R4227-30	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R4231	VLQ0576	COIL	1	
R4232	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4301	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4302	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4303	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4304-06	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R4307	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4308-11	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	4	
R4314	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4316-18	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	3	
R4319,20	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	2	
R4321	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4322	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4323	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4324	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4325	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4326	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4327	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4328	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4329	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R4330	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4331	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4332	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R4333	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R4334	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4335,36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4337	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4401	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4402	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4403	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4404	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4405	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4406	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4407	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4408	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4409	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4410	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4411	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4412	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4413	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4414	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4415	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4416	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4417	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4418	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4419	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4420	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4421-24	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4425	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4426	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4427	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4428,29	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4430	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4431	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4433	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4434	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4435	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4436	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4437,38	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4439,40	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4441	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4442,43	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4444	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4445,46	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4447,48	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4449	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4450,51	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R4452	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4453	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4454	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4455	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4456	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4461	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R4462	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4463	ERJ6RBD911	M.RESISTOR CH 1/10W 910	1	
R4464	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R4465	ERJ6RBD911	M.RESISTOR CH 1/10W 910	1	
R4466	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4467	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4468	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R4469	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4470	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
R4471	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4472	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4473	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4476	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4477	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4478	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4479	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4480	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4481	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4482	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4483	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4484	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4485	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4486	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4487	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4488	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4489	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4490	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4491	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4492	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4493	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4494	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4495	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4496-99	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4500	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4501	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4502	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4503	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4504,05	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4506	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4507	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4509	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4510	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4511	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4512	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4513	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4514,15	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4516	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4517,18	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4519	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R4520,21	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4522,23	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4524	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R4525	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4526	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R4527	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4528	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4529	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4530	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4531	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4536	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R4537	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4538	ERJ6RBD911	M.RESISTOR CH 1/10W 910	1	
R4539	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R4540	ERJ6RBD911	M.RESISTOR CH 1/10W 910	1	
R4541	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4542	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4543	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R4544	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4545	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
R4546	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4547	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4548	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4701,02	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R4703,04	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R4705-10	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	6	
R4713,14	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4716,17	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4718,19	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	2	
R4720	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4721	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4722	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4723	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4724	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4725	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4726	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4727	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4728	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4729	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4730	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4731	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4732	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4733	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4734	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4735	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4736	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4737	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4738	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4739	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4740,41	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4742	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4743	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4744	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4745	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4746	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4747	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4751	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4752	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R4753	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4754	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4755	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4756	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4757,58	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R4759	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4760	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4761	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4762	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4763	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4764	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4765	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4766	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4767	ERJ6RED220	M.RESISTOR CH 1/10W 22	1	
R4768	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4769	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4770	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4771	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4772	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4773	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4774	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4775-77	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R4778	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4779	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4780	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4781-84	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4785	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4786	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4787	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4788-90	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	3	
R4791	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4793	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4794	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4795	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4796,97	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4798,99	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4800,01	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4802	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4803,04	ERJ14YJ220	M.RESISTOR CH 1/4W 22	2	
R4805,06	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4807,08	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4809,10	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R4811,12	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4813	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4814	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4815	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4816	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4831	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4832	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4833	ERJ6RED220	M.RESISTOR CH 1/10W 22	1	
R4834	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4835	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4836	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4837-39	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R4840	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4841	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4842	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4843	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4844	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4845	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4846	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4847-50	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	4	
R4851,52	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	2	
R4853	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4854-56	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	3	
R4857	ERJ6RED150	M.RESISTOR CH 1/10W 15	1	
R4859	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4860	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4861	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4862,63	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4864,65	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4866,67	ERJ14YJ100	M.RESISTOR CH 1/4W 10	2	
R4868	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4869,70	ERJ14YJ220	M.RESISTOR CH 1/4W 22	2	
R4871,72	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4873,74	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4875,76	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R4877,78	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4879	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4880	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4881	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4882	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4901,02	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4903,04	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4905	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4906	ERJ14YJ330	M.RESISTOR CH 1/4W 33	1	
R4908	ERJ14YJ330	M.RESISTOR CH 1/4W 33	1	
R4910	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4911,12	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R4914	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4916	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4921	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4922	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R4923	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R4924	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4925	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4926	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R4927	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R4928	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4929-31	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R4932,33	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R4934-42	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	9	
R4943-46	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	4	
R4948-50	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	3	
R4951,52	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4957	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
SW4001	VSS0126	SWITCH	1	
SW4041	VSS0126	SWITCH	1	
TG4202	VJR0646	TEST POINT	1	
TG4301	VJR0646	TEST POINT	1	
TP4201-03	VJR0646	TEST POINT	3	
TP4253	VJR0646	TEST POINT	1	
TP4301,02	VJR0646	TEST POINT	2	
TP4401	VJR0646	TEST POINT	1	
TP4476	VJR0646	TEST POINT	1	
TP4701-04	VJR0646	TEST POINT	4	
VR4001	VRV0109B101	V.RESISTOR 100	1	
VR4002	VRV0112B103	V.RESISTOR 10K	1	
VR4041	VRV0109B101	V.RESISTOR 100	1	
VR4042	VRV0112B103	V.RESISTOR 10K	1	
VR4401	VRV0112B103	V.RESISTOR 10K	1	
VR4402	VRV0109B501	V.RESISTOR 500	1	
VR4476	VRV0112B103	V.RESISTOR 10K	1	
VR4477	VRV0109B501	V.RESISTOR 500	1	
VR4701,02	VRV0112B103	V.RESISTOR 10K	2	
VR4751	VRV0109B501	V.RESISTOR 500	1	
VR4831	VRV0109B501	V.RESISTOR 500	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E9	VEP84302C	H2 CUE P.C.BOARD	1	(RTL)
C4001	ECUM1H222KBN		1	
C4002	VCC0030	C.CAPACITOR	1	
C4003	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C4004	ECUM1H822KBN	C.CAPACITOR CH 50V 8200P	1	
C4005,06	ECUM1H272KBN	C.CAPACITOR CH 50V 2700P	2	
C4007	ECUX1H273KBN	C.CAPACITOR CH 50V 0.027U	1	
C4008	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4009	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4010	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4011	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4012	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4013	ECST1VY684Z	T.CAPACITOR CH 35V 0.68U	1	
C4014,15	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C4016	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C4017	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4018	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4019	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	1	
C4020	ECUX1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C4021	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4022	ECUX1C394KBM	C.CAPACITOR CH 16V 0.39U	1	
C4023	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4024,25	ECUX1C394KBM	C.CAPACITOR CH 16V 0.39U	2	
C4026-28	ECHU1C104JB	P.CAPACITOR 16V 0.1U	3	
C4029	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C4030	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4031	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4032,33	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4034	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4035	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4036	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4037	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C4038	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4039,40	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4041	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4042	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C4043	ECUM1H822KBN	C.CAPACITOR CH 50V 8200P	1	
C4044	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4045	ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	1	
C4046	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4047	ECUX1C224KBM	C.CAPACITOR CH 16V 0.22U	1	
C4048	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4049	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	1	
C4050	ECHU1C104JB	P.CAPACITOR 16V 0.1U	1	
C4052	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C4054	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4056	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4101,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4103,04	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	2	
C4105-07	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	3	
C4108	ECEV0JV220Q	E.CAPACITOR CH6.3V 22U	1	
C4109	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4110	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C4111,12	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C4113,14	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	2	
C4115,16	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	
C4117	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C4118	ECEV0JV220Q	E.CAPACITOR CH6.3V 22U	1	
C4119	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4120,21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4122	ECEV0JV220Q	E.CAPACITOR CH6.3V 22U	1	
C4123-25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4126	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4127,28	ECEV0JV220Q	E.CAPACITOR CH6.3V 22U	2	
C4129	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4130	ECEV0JV220Q	E.CAPACITOR CH6.3V 22U	1	
C4134,35	ECEA1HGE330	E.CAPACITOR 50V 33U	2	
C4136,37	ECUM1H030CCN	C.CAPACITOR CH 50V 3P	2	
C4138	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	1	
C4139	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4140,41	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4142	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4143-46	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C4147,48	ECUX1C105KBM	C.CAPACITOR CH 16V 1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4201,02	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4203	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C4204,05	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C4206	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4207	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C4208	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4209,10	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C4211	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4212	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4213	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4214	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4215	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4216,17	ECEA1CGE101	E.CAPACITOR 16V 100U	2	
C4218	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4219	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4220	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4221	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4222	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C4223-25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4226	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4227,28	ECUX1C474KBM	C.CAPACITOR CH 16V 0.47U	2	
C4229,30	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	2	
C4231	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4232	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4233	ECHU1H223JB	P.CAPACITOR 50V 0.022U	1	
C4234	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C4235	VCF2JAB681J	C.CAPACITOR 630V 680P	1	
C4236	ECUX1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C4237	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4238	ECUX1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C4239	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4240	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4241	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4242	VCF2GAB682J	C.CAPACITOR 400V 6800P	1	
C4243	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4244	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4245	VCF2GAB682J	C.CAPACITOR 400V 6800P	1	
C4246,47	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	2	
C4303-06	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	4	
C4307,08	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4401	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4402	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4403	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4404-06	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4407	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C4408	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4409	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C4410-13	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C4414	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4415	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C4416	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4417	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4418	ECEV1CN100Q	E.CAPACITOR CH 16V 10U	1	
C4501-03	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C4504,05	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
D4101	MA152A	DIODE	1	
D4102-04	MA157	DIODE	3	
D4201,02	MA157	DIODE	2	
D4203-05	MA152A	DIODE	3	
FL4001	EIR7QF012B	TRANSFORMER	1	
FL4002	VLF1069	FILTER	1	
FL4201,02	VLF0941C223	FILTER	2	
IC4001	NJM4580ED	IC	1	
IC4002	MC14053BF	IC	1	
IC4003	CXA1102M	IC	1	
IC4004,05	NJM4580ED	IC	2	
IC4006	MC14052BF	IC	1	
IC4008	NJM4580ED	IC	1	
IC4009	AN78N09	IC	1	
IC4010	AN79N09	IC	1	
IC4011,12	NJM4580ED	IC	2	
IC4013	MC14053BF	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC4014	NJM4580ED	IC	1	
IC4015	MC14053BDT	IC	1	
IC4101,02	AD7945BR	IC	2	
IC4103-05	NJM4580ED	IC	3	
IC4106	MC14053BF	IC	1	
IC4107	NJM4580ED	IC	1	
IC4108	XC62AP3002P	IC	1	
IC4109	AK4503VF	IC	1	
IC4110	T74VHCT244F	IC	1	
IC4111	T74VHC244F	IC	1	
IC4112	NJM4580ED	IC	1	
IC4113	MC14052BF	IC	1	
IC4114	NJM4580ED	IC	1	
IC4115	NJM78L05UA	IC	1	
IC4116	NJM79L05UA	IC	1	
IC4117	MC14053BF	IC	1	
IC4201	MC14052BF	IC	1	
IC4202	NJM4580ED	IC	1	
IC4203	NJM2043MD	IC	1	
IC4204,05	AQV212SX	IC	2	
IC4206	AN78N09	IC	1	
IC4207	TC4W53F	IC	1	
IC4301,02	SN74S1051NS	IC	2	
IC4303	74F245SJ	IC	1	
IC4304	74F541SJ	IC	1	
IC4305	74AC139SJ	IC	1	
IC4306	TC7SU04F	IC	1	
IC4307,08	UPD71055GB	IC	2	
IC4401	TC4W53F	IC	1	
IC4402	MC74HC74AF	IC	1	
IC4403	MC74HC541AF	IC	1	
IC4404	MB621926	IC	1	
IC4405	MB81480070	IC	1	
IC4406	NJM78L05UA	IC	1	
IC4407	AK4320VM	IC	1	
IC4408	TC4W53F	IC	1	
IC4501	MB621926	IC	1	
IC4502,03	MC74HC164AF	IC	2	
IC4504	TC7SU04F	IC	1	
IC4505	TC7W74F	IC	1	
IC4506	TC4W53F	IC	1	
IC4507	MB81480070	IC	1	
L4001	VLQ0423J472	COIL 4700UH	1	
P4001	VJP3454B096	CONNECTOR (MALE)	1	
P4002	VJP1230T	CONNECTOR (MALE) 3P	1	
P4003	VJP1233T	CONNECTOR (MALE) 6P	1	
Q4001,02	2SD1149-R	TRANSISTOR	2	
Q4003	2SB792-R	TRANSISTOR	1	
Q4004,05	2SD602A-R	TRANSISTOR	2	
Q4006	2SB710A-R	TRANSISTOR	1	
Q4101-03	2SD1328	TRANSISTOR	3	
Q4201	2SD1994A-R	TRANSISTOR	1	
Q4202	2SB1322A-R	TRANSISTOR	1	
Q4203	2SD1994A-R	TRANSISTOR	1	
Q4204	2SB1322A-R	TRANSISTOR	1	
Q4205	2SD602A-R	TRANSISTOR	1	
Q4206,07	2SB710A-R	TRANSISTOR	2	
Q4208	2SD602A-R	TRANSISTOR	1	
Q4209	2SB710A-R	TRANSISTOR	1	
Q4210-12	2SD602A-R	TRANSISTOR	3	
Q4213	2SB710A-R	TRANSISTOR	1	
Q4214	2SD602A-R	TRANSISTOR	1	
Q4215	2SB710A-R	TRANSISTOR	1	
Q4216-19	2SD602A-R	TRANSISTOR	4	
QR4001,02	UN2213	TRANSISTOR-RESISTOR	2	
QR4201	UN2213	TRANSISTOR-RESISTOR	1	
R4001	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R4002	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4003,04	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4005	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4006	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4007	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4008	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R4009,10	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	2	
R4011	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R4012	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R4013	ERJ6RBD433	M.RESISTOR CH 1/10W 43K	1	
R4014,15	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4016	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4017	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4018	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R4019	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4020	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4021	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4022	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4023,24	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4025	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4026	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R4027	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4028	ERJ6GEYF124	M.RESISTOR CH 1/10W 120K	1	
R4029	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4030	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1	
R4031	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R4032	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4033,34	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R4035	ERJ6RBD152	M.RESISTOR CH 1/10W 1.5K	1	
R4036	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R4037	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4038	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R4039,40	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	2	
R4041	ERJ6RBD823	M.RESISTOR CH 1/10W 82K	1	
R4044	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R4045	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4046	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4047,48	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4049	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4051	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4052	ERJ6RBD202	M.RESISTOR CH 1/10W 2K	1	
R4053	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4054	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4055	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4056	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4057	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4058,59	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	2	
R4060,61	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R4064-66	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R4068,69	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R4071	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4072	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4073	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4075	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4076	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4078	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1	
R4079	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4081	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4082	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1	
R4083	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4085	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4090	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4092	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4094	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4096	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4101	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4102	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4103	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4104	ERJ6RED124	M.RESISTOR CH 1/10W 120K	1	
R4105	ERJ6RBD273	M.RESISTOR CH 1/10W 27K	1	
R4106	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R4107	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4108	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
R4109	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R4110	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4111	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4112	ERJ6RBD912	M.RESISTOR CH 1/10W 9.1K	1	
R4113	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4114	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4115	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R4116	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4117	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4118	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4119	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4121	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4122-29	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	8	
R4131,32	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	2	
R4134	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4135	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4136	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R4137,38	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4139,40	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R4142	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4143	ERJ12YJ621	M.RESISTOR CH 1/2W 620	1	
R4144	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R4145	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4146,47	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	2	
R4148	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4149	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R4150	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R4151	ERJ6RHD2101	M.RESISTOR CH 1/10W 2.1K	1	
R4152	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R4153	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R4154	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R4155	ERJ6RHD2101	M.RESISTOR CH 1/10W 2.1K	1	
R4156	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R4157,58	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	2	
R4159	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4160,61	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	2	
R4162	ERJ6RED470	M.RESISTOR CH 1/10W 47	1	
R4163	ERJ6RBD152	M.RESISTOR CH 1/10W 1.5K	1	
R4164	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4165	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4166	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4169	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4170	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4171	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R4172	ERJ6RBD152	M.RESISTOR CH 1/10W 1.5K	1	
R4173	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R4174	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4175	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4176	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R4177	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4178	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4179	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R4201	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4202	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4203	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R4204	ERJ6RBD123	M.RESISTOR CH 1/10W 12K	1	
R4205	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4206	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R4207	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4208	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4209	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4210	ERJ6RBD271	M.RESISTOR CH 1/10W 270	1	
R4211	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4212	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4213	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4214,15	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R4216	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R4217	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4218,19	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	2	
R4220	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	1	
R4221	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R4222	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4223,24	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4225	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4226,27	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R4228-31	ERJ14YJ100	M.RESISTOR CH 1/4W 10	4	
R4232,33	ERJ14YJ220	M.RESISTOR CH 1/4W 22	2	
R4234	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4235,36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4237	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4238,39	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	2	
R4240,41	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4242	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4243	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4244	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4245,46	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2	
R4247	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4248	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4249,50	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2	
R4251	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4252	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R4253	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4254	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R4255	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R4256	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R4257	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R4258	ERJ6GEYG220	M.RESISTOR CH 1/10W 22	1	
R4259	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4260	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4261	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4262	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R4263	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4264	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4265,66	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2	
R4267,68	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R4269	ERJ6GEYG180	M.RESISTOR CH 1/10W 18	1	
R4270,71	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4272	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4273	ERJ6GEYJ1R0	M.RESISTOR CH 1/10W 1	1	
R4274,75	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R4276	ERJ6GEYG180	M.RESISTOR CH 1/10W 18	1	
R4277	ERJ6GEYJ1R0	M.RESISTOR CH 1/10W 1	1	
R4278	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R4279,80	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R4281	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R4282	ERJ6RBD301	M.RESISTOR CH 1/10W 300	1	
R4283	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R4284	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4285	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R4301,02	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R4303-16	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	14	
R4401	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4402	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4403-06	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	4	
R4407	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4408	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4409	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4410	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4411-13	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R4414,15	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R4417-20	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R4421	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4423	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4425	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4427	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4430	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4502-05	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	4	
R4506-11	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	6	
R4513,14	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R4517	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4519	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
SW4001	VSS0367-04B	SWITCH	1	
SW4002	VSS0342	SWITCH	1	
SW4101	VSS0126	SWITCH	1	
T4201	VLT0866	TRANSFORMER	1	
T4202	VLT0868	TRANSFORMER	1	
T4203,04	VLT0867	TRANSFORMER	2	
TG4101	VJR0646	TEST POINT	1	
TG4201	VJR0646	TEST POINT	1	
TP4001-03	VJR0646	TEST POINT	3	
TP4101-03	VJR0646	TEST POINT	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
TP4201-03	VJR0646	TEST POINT	3	
VR4001	VRV0112B103	V.RESISTOR 10K	1	
VR4002	VRV0064B503	V.RESISTOR 50K	1	
VR4003	VRV0112B502	V.RESISTOR 5K	1	
VR4005	VRV0112B203	V.RESISTOR 20K	1	
VR4006	VRV0112B103	V.RESISTOR 10K	1	
VR4202	VRV0112B104	V.RESISTOR 100K	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
■E10	VEP85048A	H3 EQ P.C.BOARD	1	(RTL)
C5001-04	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5005,06	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C5008,09	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5011,12	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5013	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5014,15	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5016,17	ECUX1H122KBN	C.CAPACITOR CH 50V 1200P	2	
C5018,19	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5020	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C5021-29	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	9	
C5101-04	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5105	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5107	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5108,09	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5111-16	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	6	
C5117	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5118-25	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	8	
C5126,27	ECUX1H122KBN	C.CAPACITOR CH 50V 1200P	2	
C5128	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C5129-37	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	9	
C5202-11	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	10	
C5213-15	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5217-19	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5220	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5223-30	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	8	
C5231	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C5232,33	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5234	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C5235	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5236	ECUX1C104KBN	C.CAPACITOR CH 16V 0.1U	1	
C5238-40	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5241	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C5242-47	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	6	
C5249,50	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5251,52	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	2	
C5253	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5254	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C5256	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C5258-62	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	5	
C5266	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5401-03	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5405-11	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	7	
C5413-16	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5418,19	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5420	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5423-32	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	10	
C5433	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1	
C5434	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5435	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C5436	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5437	ECUX1C104KBN	C.CAPACITOR CH 16V 0.1U	1	
C5438	ECUX1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5439-41	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5442	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C5443-52	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	10	
C5453,54	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	2	
C5455	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5456,57	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	2	
C5460-64	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	5	
C5466	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5601-04	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5605	ECUX1H040CCN	C.CAPACITOR CH 50V 4P	1	
C5606-09	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5611	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5613,14	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5619-22	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5625	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5627	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5630	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5631	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C5633-36	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5638	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5643	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5701-05	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	5	
C5710,11	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5715,16	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5801,02	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5806-09	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C5811-13	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5818	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C5819,20	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5822	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5901,02	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5904	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5909	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5912	ECEV0JV330Q	E.CAPACITOR CH6.3V 33U	1	
C5913	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5951	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5952	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5953	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5954	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C5955-57	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5958	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C5959,60	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5961	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C5962,63	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5964	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C5965,66	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5967	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C5968,69	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5970	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5971,72	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5973	ECEV0JV470Q	E.CAPACITOR CH6.3V 47U	1	
C5974	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5975	ECEA1AGE471	E.CAPACITOR 10V 470U	1	
C5976	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5977,78	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5979	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C5980	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5981-83	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C5984	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5985	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5986	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5987,88	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C5989	ECEV1EV100Q	E.CAPACITOR CH 25V 10U	1	
C5990	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5991	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C5992	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C5995,96	ECEA1CGE470	E.CAPACITOR 16V 47U	2	
D5001	MA3020	DIODE	1	
D5101	MA3020	DIODE	1	
D5201	MA3036-H	DIODE	1	
D5401	MA3036-H	DIODE	1	
D5402	MA3030-H	DIODE	1	
D5403	MA3033-L	DIODE	1	
D5901	MA152K	DIODE	1	
D5951-62	MA701A	DIODE	12	
FL5951-55	VLF1016A470	FILTER	5	
IC5001	AN3730FA	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC5101	M52055FP	IC	1	
IC5102	AN3730FA	IC	1	
IC5201	TC7S32F	IC	1	
IC5202	MC14053BF	IC	1	
IC5203	NJM319M	IC	1	
IC5204	NJM082BM	IC	1	
IC5205	TC7SH32F	IC	1	
IC5206	NJM084M	IC	1	
IC5207	AN3740FAP	IC	1	
IC5208	MC74HC4066F	IC	1	
IC5209	NJM082BM	IC	1	
IC5401	NJM082BM	IC	1	
IC5402	TC7W08F	IC	1	
IC5403	TC7S32F	IC	1	
IC5404	MC14053BF	IC	1	
IC5405	NJM082BM	IC	1	
IC5406	NJM084M	IC	1	
IC5407	NJM319M	IC	1	
IC5408	AN3740FAP	IC	1	
IC5409	MC74HC4066F	IC	1	
IC5410	NJM082BM	IC	1	
IC5411	T74LCX244F	IC	1	
IC5601	UPC1663G	IC	1	
IC5602	NJM084M	IC	1	
IC5603	CXD2302Q	IC	1	
IC5701	MB88344PFV	IC	1	
IC5702	NJM084M	IC	1	
IC5703	NJM082BM	IC	1	
IC5801,02	74F04SJ	IC	2	
IC5803	74F08SJ	IC	1	
IC5805	74F151ASJ	IC	1	
IC5806	74F157ASJ	IC	1	
IC5807	MC10H124M	IC	1	
IC5810	TC7S32F	IC	1	
IC5901	T160G22-1225	IC	1	
IC5902	TC7W08F	IC	1	
IC5903	S80727ANDQ	IC	1	
IC5951-54	XC62AP3002P	IC	4	
IC5955,56	AN78M05F	IC	2	
IC5957,58	AN79M05F	IC	2	
IC5959	NJM78L09UA	IC	1	
L5701	VLQ0163J100	COIL 10UH	1	
L5801	VLQ0163J8R2	COIL 8.2UH	1	
L5802	VLQ0163J2R7	COIL 2.7UH	1	
L5951-53	VLP0133	COIL	3	
P5951	VJP3454B096	CONNECTOR (MALE)	1	
P5952	VJP1231R	CONNECTOR (MALE)	1	
P5953	VJP1231T	CONNECTOR (MALE) 4P	1	
Q5001	XN5531	TRANSISTOR-RESISTOR	1	
Q5002	2SC2295-C	TRANSISTOR	1	
Q5003	XN5531	TRANSISTOR-RESISTOR	1	
Q5004-12	2SC2295-C	TRANSISTOR	9	
Q5101	XN5531	TRANSISTOR-RESISTOR	1	
Q5102	2SC2295-C	TRANSISTOR	1	
Q5103	XN5531	TRANSISTOR-RESISTOR	1	
Q5104-10	2SC2295-C	TRANSISTOR	7	
Q5202,03	2SC2295-C	TRANSISTOR	2	
Q5204	2SA1022-C	TRANSISTOR	1	
Q5401-03	2SC2295-C	TRANSISTOR	3	
Q5404	2SA1022-C	TRANSISTOR	1	
Q5601,02	2SC2295-C	TRANSISTOR	2	
Q5603	XN5531	TRANSISTOR-RESISTOR	1	
Q5606-08	2SC2295-C	TRANSISTOR	3	
QR5101	UN2213	TRANSISTOR-RESISTOR	1	
QR5401,02	UN2213	TRANSISTOR-RESISTOR	2	
R5004	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R5006	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R5007	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5008-11	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	4	
R5012	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5013,14	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5015	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5016	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5018	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5019	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R5020-22	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	3	
R5023	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R5025	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R5026,27	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5028	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5029	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R5030	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5031	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R5032	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5033	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5034	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5035,36	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5037	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5038	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5039	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5040	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5041	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5042	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5043	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5044	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5045	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5046,47	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5048	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5049,50	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5051	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5052	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5053	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5054	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5101,02	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5103	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R5104,05	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5106	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R5107	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5108-11	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	4	
R5112	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5114,15	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5116	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5117	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5118	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5119	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5120	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R5121	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5122	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	1	
R5124	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5125	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5126	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R5127	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5128,29	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5131	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R5132	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R5133	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R5134	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5135,36	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5137	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5138	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5139	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5141	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5142	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5143	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5144	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5145	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5146	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5147,48	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5149	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5150,51	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5152	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5206	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5208	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5210	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5211	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5212	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R5214	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5215	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5216	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5217	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5218	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5219	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5220	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5222,23	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5225	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5227	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5229	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5230	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5231,32	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5233	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5234	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5235	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5238	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5239	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5240	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5242	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5243	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5244	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5245	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5246	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5247	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5248	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5249	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R5250	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5251	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5252	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R5253	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R5255	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5256	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5257	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5258	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5259	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5262	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R5263	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5264	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R5265	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5266	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5267	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5269	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5270	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5271	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5273	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5277	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5281	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5283,84	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5288	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5290	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5291	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5292,93	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5302,03	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5401,02	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5410,11	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5413	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5414	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5415	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R5416	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5417	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5418	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5419	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5420	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R5421	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5422	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5425	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5426	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R5429	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5430	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5431	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5432	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5433	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5434	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5435	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5436	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5437	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5438,39	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5440	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5441	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5442	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5445	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5446	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5447	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5449	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5450	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5451	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5452	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5453	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5454	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5455	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5456	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R5457	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5458	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R5459	ERJ6GEYG224	M.RESISTOR CH 1/10W 220K	1	
R5461	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5462	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5463	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5464	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5465	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5468	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R5469	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5470	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R5471	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5472	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5474	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5475	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5476	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5478	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5479	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5480	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5483	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5488	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5490,91	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5494	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5496	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5497	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5498	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5499,00	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5501	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R5502	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5504,05	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5508	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5509	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5510	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5601	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5602	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5603	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5604,05	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5606	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5607	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5608,09	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	2	
R5610	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5612,13	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R5614,15	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	2	
R5616	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R5618	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5620	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5621	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5622	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R5623	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5624	ERJ6GEYJ820	M.RESISTOR CH 1/10W 82	1	
R5627	ERJ6GEYJ820	M.RESISTOR CH 1/10W 82	1	
R5629	ERJ6GEYG680	M.RESISTOR CH 1/10W 68	1	
R5631	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5632	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5634	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5635	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5639	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5640	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R5646	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5647	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5650	ERJ6GEYG750	M.RESISTOR CH 1/10W 75	1	
R5654	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5656	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R5659	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R5663	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5664	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5667	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5674	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5675,76	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5701-03	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R5704-06	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R5707	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5708	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R5710	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5711	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5712	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R5713,14	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R5717	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R5718	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5724	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R5729	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5730	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R5736	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5737,38	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5801	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5802	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5807,08	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5809	ERDS2T0	C.RESISTOR 1/4W 0	1	
R5811-13	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	3	
R5818-25	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	8	
R5830-33	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	4	
R5835	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5837-39	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	3	
R5840	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R5845	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R5864	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5866,67	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5901-03	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R5905	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5906	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R5907,08	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5909	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5910	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R5911	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R5912	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5914-16	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	3	
R5917,18	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5921	ERDS2TJ470	C.RESISTOR 1/4W 47	1	
SW5801	VSS0367-04B	SWITCH	1	
TG5101	VJR0646	TEST POINT	1	
TG5201	VJR0646	TEST POINT	1	
TG5401	VJR0646	TEST POINT	1	
TG5801	VJR0646	TEST POINT	1	
TP5001,02	VJR0646	TEST POINT	2	
TP5101,02	VJR0646	TEST POINT	2	
TP5201-04	VJR0646	TEST POINT	4	
TP5401-05	VJR0646	TEST POINT	5	
TP5601,02	VJR0646	TEST POINT	2	
TP5801,02	EYF6CU	TEST POINT	2	
TP5901	VJR0646	TEST POINT	1	
VR5210	VRV0109B203	V.RESISTOR 20K	1	
VR5410	VRV0109B203	V.RESISTOR 20K	1	
VR5601	VRV0109B102	V.RESISTOR 1K	1	
VR5801	VRV0113B501	V.RESISTOR 500	1	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VML2144	CARD PULLER	1	
■E11	VEP85049A	H4 RF AMP P.C.BOARD	1	(RTL)
C5003-12	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	10	
C5013	ECEV0JV101Q	E.CAPACITOR CH6.3V 100U	1	
C5014	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5020,21	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	2	
C5022,23	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C5024,25	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	2	
C5026,27	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C5052-54	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	3	
C5057-64	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
C5066,67	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5069-94	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	26	
C5099,00	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5105-08	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C5110,11	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5116-33	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	18	
C5136	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5140,41	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5202,03	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5206,07	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5209,10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5600-07	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
C5608	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C5609-11	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C5612	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C5613	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5614	ECUX1H473KBN	C.CAPACITOR CH 50V 0.047U	1	
C5615	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C5617	ECUX1H473KBN	C.CAPACITOR CH 50V 0.047U	1	
C5618,19	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C5620,21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5622	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C5624	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C5626	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C5628	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C5630,31	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5632	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C5633-36	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C5637,38	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C5639,40	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5643-45	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C5646,47	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C5648-58	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	11	
C5659	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5660	ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	1	
C5661-63	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C5665	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5670	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5671	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C5700-07	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
C5708	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C5709-11	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C5713	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C5714	ECUX1H473KBN	C.CAPACITOR CH 50V 0.047U	1	
C5715	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C5717	ECUX1H473KBN	C.CAPACITOR CH 50V 0.047U	1	
C5718,19	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C5720,21	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5722	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C5724	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C5726	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C5728	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C5730,31	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5732	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C5733-36	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C5737,38	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C5739,40	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C5743-45	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C5746,47	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C5748-58	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	11	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5759	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C5760	ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	1	
D5001	MA153	DIODE	1	
D5002	MA152WK	DIODE	1	
FL5002-05	VLF0931	FILTER	4	
IC5002	MC74HC32AF	IC	1	
IC5003	MC74HC04AF	IC	1	
IC5004	NJM082BM	IC	1	
IC5005	MC74HC86AF	IC	1	
IC5006,07	TC4S66F	IC	2	
IC5008	NJM082BM	IC	1	
IC5009	MC14053BF	IC	1	
IC5010	AN7805F	IC	1	
IC5011	AN7905F	IC	1	
IC5013	MB88344PFV	IC	1	
IC5014-16	NJM082BM	IC	3	
IC5017	MC14053BF	IC	1	
IC5020	MC10H116L	IC	1	
IC5021	MC10H102L	IC	1	
IC5022	MC10131L	IC	1	
IC5051	UPC1663G	IC	1	
IC5052	NJM1496M	IC	1	
IC5053	NJM082BM	IC	1	
IC5054	UPC1663G	IC	1	
IC5055	NJM1496M	IC	1	
L5600	VLQ0188K1R0N	COIL 1UH	1	
L5601,02	VLQ0188KR47N	COIL 0.47UH	2	
L5603,04	VLQ0188J101	COIL 100UH	2	
L5605,06	VLQ0163KR39	COIL 0.39UH	2	
L5700-02	VLQ0188K1R0N	COIL 1UH	3	
L5703,04	VLQ0188J101	COIL 100UH	2	
L5705,06	VLQ0188KR39N	COIL 0.39UH	2	
P5001	VJP3454B096	CONNECTOR (MALE)	1	
P5002	VJP1230T	CONNECTOR (MALE) 3P	1	
P5003	VJP1230G	CONNECTOR (MALE) 3P	1	
P5004	VJP1230T	CONNECTOR (MALE) 3P	1	
P5005	VJP1230G	CONNECTOR (MALE) 3P	1	
Q5001	2SD601A-R	TRANSISTOR	1	
Q5002	2SB709A-R	TRANSISTOR	1	
Q5006,07	2SA1022-C	TRANSISTOR	2	
Q5008	2SD601A-R	TRANSISTOR	1	
Q5600	XN6537	TRANSISTOR-RESISTOR	1	
Q5601,02	2SC2295-C	TRANSISTOR	2	
Q5603	XN5531	TRANSISTOR-RESISTOR	1	
Q5604	2SC3130	TRANSISTOR	1	
Q5605	XN5531	TRANSISTOR-RESISTOR	1	
Q5606,07	2SK508K512	TRANSISTOR	2	
Q5608	2SC3130	TRANSISTOR	1	
Q5609,10	2SD1979	TRANSISTOR	2	
Q5611-13	2SC3130	TRANSISTOR	3	
Q5614,15	2SK508K512	TRANSISTOR	2	
Q5616-19	XN5531	TRANSISTOR-RESISTOR	4	
Q5620,21	2SC3130	TRANSISTOR	2	
Q5700	XN6537	TRANSISTOR-RESISTOR	1	
Q5701,02	2SC2295-C	TRANSISTOR	2	
Q5703	XN5531	TRANSISTOR-RESISTOR	1	
Q5704	2SC3130	TRANSISTOR	1	
Q5705	XN5531	TRANSISTOR-RESISTOR	1	
Q5706,07	2SK508K512	TRANSISTOR	2	
Q5708	2SC3130	TRANSISTOR	1	
Q5709,10	2SD1979	TRANSISTOR	2	
Q5711-13	2SC3130	TRANSISTOR	3	
Q5714,15	2SK508K512	TRANSISTOR	2	
Q5716-19	XN5531	TRANSISTOR-RESISTOR	4	
Q5720	2SC3130	TRANSISTOR	1	
R5001	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5003	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5010,11	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5012,13	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5015	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5018,19	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5020	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R5021	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R5022-26	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R5040	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5041,42	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5043	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5044	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5046-48	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	3	
R5049,50	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5051	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5052-54	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R5055	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5056	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5057	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5058	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5059,60	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5061	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5062	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5063-65	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R5069-80	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	12	
R5081	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R5082	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R5083,84	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R5085	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5086	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R5087	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R5088,89	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	2	
R5090	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5091	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5092,93	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R5094	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R5095	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R5096	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5097,98	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R5099	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R5100	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R5111	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5112	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R5113	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R5114,15	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R5116	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5117	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R5118	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R5119,20	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R5122	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5130-33	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
R5140-45	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	6	
R5146	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5148	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R5149	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R5150	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R5151	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R5153	ERJ6RBD562	M.RESISTOR CH 1/10W 5.6K	1	
R5154	ERJ6RBD333	M.RESISTOR CH 1/10W 33K	1	
R5155	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R5156	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5161	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5171,72	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R5200,01	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R5202-05	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	4	
R5206,07	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R5208-10	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	3	
R5211,12	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R5214,15	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R5216,17	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R5218,19	ERJ6GEYJ820	M.RESISTOR CH 1/10W 82	2	
R5230	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R5231,32	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5600,01	ERJ6RED470	M.RESISTOR CH 1/10W 47	2	
R5602	ERJ6RED560	M.RESISTOR CH 1/10W 56	1	
R5603,04	ERJ6RBD271	M.RESISTOR CH 1/10W 270	2	
R5605	ERJ6RED680	M.RESISTOR CH 1/10W 68	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5606	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R5607,08	ERJ6RBD391	M.RESISTOR CH 1/10W 390	2	
R5609	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R5610,11	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5612	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5613	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R5614	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5615	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5616,17	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5618,19	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R5620,21	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5622,23	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5624,25	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R5626	ERJ6RBD181	M.RESISTOR CH 1/10W 180	1	
R5627	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R5628	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R5629	ERJ6RBD181	M.RESISTOR CH 1/10W 180	1	
R5630	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R5631	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5632	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5633	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5634	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5635	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R5637,38	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5639,40	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R5642,43	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5644	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5645	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5646,47	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5648	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5649	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5650,51	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5652	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5653	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5654,55	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5656,57	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	2	
R5658,59	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R5660	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5661	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R5662	ERJ6RBD221	M.RESISTOR CH 1/10W 220	1	
R5663	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R5664-66	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	3	
R5667,68	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5669,70	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5671,72	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5673,74	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5675,76	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5677,78	ERJ6RBD391	M.RESISTOR CH 1/10W 390	2	
R5679,80	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	2	
R5681,82	ERJ6RED470	M.RESISTOR CH 1/10W 47	2	
R5683,84	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5685,86	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5687,88	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R5689	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5690	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5691	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5692	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5693-96	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R5697	ERJ6RBD821	M.RESISTOR CH 1/10W 820	1	
R5698	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R5699-02	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	4	
R5703	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
R5704	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R5705	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R5706,07	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	2	
R5708	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R5709	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5710	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5711-15	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	5	
R5717	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5718	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5719	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5720	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5800,01	ERJ6RED470	M.RESISTOR CH 1/10W 47	2	
R5802	ERJ6RED560	M.RESISTOR CH 1/10W 56	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5803,04	ERJ6RBD271	M.RESISTOR CH 1/10W 270	2	
R5805	ERJ6RBD121	M.RESISTOR CH 1/10W 120	1	
R5806	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R5807,08	ERJ6RBD391	M.RESISTOR CH 1/10W 390	2	
R5809	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R5810,11	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5812	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5813	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R5814	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5815	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5816,17	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5818,19	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R5820,21	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5822,23	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5824,25	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	2	
R5826	ERJ6RBD181	M.RESISTOR CH 1/10W 180	1	
R5827	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R5828	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R5829	ERJ6RBD181	M.RESISTOR CH 1/10W 180	1	
R5830	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R5831	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5832	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5833	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5834	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5835	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R5836	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
R5837	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5838	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5839,40	ERJ6RBD151	M.RESISTOR CH 1/10W 150	2	
R5842,43	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5844	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5845	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5846,47	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5848	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5849	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5850,51	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5852	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5853	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5854,55	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5856,57	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	2	
R5858,59	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R5860	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5861	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R5862	ERJ6RBD221	M.RESISTOR CH 1/10W 220	1	
R5863	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R5864-66	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	3	
R5867,68	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5869,70	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5871,72	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5873,74	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5875,76	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5877,78	ERJ6RBD391	M.RESISTOR CH 1/10W 390	2	
R5879,80	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	2	
R5881,82	ERJ6RED470	M.RESISTOR CH 1/10W 47	2	
R5883,84	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5885,86	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5887,88	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R5889	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R5890	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	1	
R5891	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5892	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5893-96	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	4	
R5897	ERJ6RBD821	M.RESISTOR CH 1/10W 820	1	
R5898	ERJ6RBD102	M.RESISTOR CH 1/10W 1K	1	
R5899-02	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	4	
R5903	ERJ6RBD822	M.RESISTOR CH 1/10W 8.2K	1	
R5904	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R5905	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R5906,07	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	2	
R5908	ERJ6RBD153	M.RESISTOR CH 1/10W 15K	1	
R5909	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5910	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5911-14	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	4	
R5920	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
RY5001	VSY2069	RELAY	1	
SS5008	VJS1990	CONNECTOR (FEMALE)	1	
SW5008	VJP2536A003	CONNECTOR (MALE)	1	
TG5001-03	VJR0646	TEST POINT	3	
TG5005-09	VJR0646	TEST POINT	5	
TP5001-03	VJR0646	TEST POINT	3	
TP5007-12	VJR0646	TEST POINT	6	
TP5015-20	VJR0646	TEST POINT	6	
VC5600,01	ECV1ZW20X53T	TRIMMER	2	
VC5700,01	ECV1ZW20X53T	TRIMMER	2	
VR5013,14	VRV0112B502	V.RESISTOR 5K	2	
		MISCELLANEOUS		
	VML2143	CARD PULLER	1	
	VML2144	CARD PULLER	1	
	VSC3626	HEAT SINK (A)	2	
	XNG26EFXS	NUT	2	
	XYN26+F10	SCREW	2	
■E12	VEP85151A	HEAD BUFFER P.C.BOARD	1	(RTL)
C5001	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5002	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C5003	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5004	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C5005	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5006	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C5007	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5008	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C5009	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C5010	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C5011-14	ECEV1EN4R7Q	E.CAPACITOR CH 25V 4.7U	4	
C5015,16	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C5017-20	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	4	
C5021,22	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	2	
C5050-60	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	11	
C5061,62	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C5063-66	ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	4	
C5100-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C5200-03	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C5300-02	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C5303	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C5304	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C5305	ECUX1H030CCV	C.CAPACITOR CH 50V 3P	1	
C5306	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C5307,08	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	2	
C5350-52	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C5353	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C5354	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C5355	ECUX1H030CCV	C.CAPACITOR CH 50V 3P	1	
C5356	ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C5357,58	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	2	
C5400	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5401-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C5406,07	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C5413-16	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	4	
C5420	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5421	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C5500	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5501-05	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	5	
C5506,07	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C5514-16	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	3	
C5520	ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5521	ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C5600-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	11	
C5700-10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	11	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5801,02	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	2	
D5400,01	MA152WK	DIODE	2	
D5500,01	MA152WK	DIODE	2	
FL5001-05	VLF1016A470	FILTER	5	
IC5003	MC74HC04AF	IC	1	
IC5008,09	TC4S66F	IC	2	
IC5010	XC62AP5002P	IC	1	
IC5011	XC62DN5002P	IC	1	
IC5014	NJM082BM	IC	1	
IC5023,24	MC10H116L	IC	2	
IC5025,26	TC4S69F	IC	2	
IC5027,28	TC4S30F	IC	2	
IC5030-33	TC4S30F	IC	4	
IC5034	XC62DN5002P	IC	1	
IC5035	TC4S71F	IC	1	
IC5040-43	TC4S30F	IC	4	
IC5045	TC4S71F	IC	1	
IC5050	UPC5102GS030	IC	1	
IC5060	UPC5102GS030	IC	1	
L5300,01	VLQ0163J2R2	COIL 2.2UH	2	
L5350,51	VLQ0163J2R2	COIL 2.2UH	2	
L5400,01	VLQ0163J330	COIL 33UH	2	
L5500,01	VLQ0163J330	COIL 33UH	2	
P5001	VJS3375B060	CONNECTOR (FEMALE)	1	
P5002	VJS3900C013	CONNECTOR (FEMALE)	1	
P5003	VJS3900C010	CONNECTOR (FEMALE)	1	
Q5200,01	2SA1022-C	TRANSISTOR	2	
Q5300	2SD601A-R	TRANSISTOR	1	
Q5301	2SB709A-R	TRANSISTOR	1	
Q5302,03	2SC3735B35	TRANSISTOR	2	
Q5350	2SD601A-R	TRANSISTOR	1	
Q5351	2SB709A-R	TRANSISTOR	1	
Q5352,53	2SC3735B35	TRANSISTOR	2	
Q5400	2SA1022-C	TRANSISTOR	1	
Q5401-04	2SD1979	TRANSISTOR	4	
Q5405,06	2SC2954	TRANSISTOR	2	
Q5407,08	2SC3130	TRANSISTOR	2	
Q5409	2SC2954	TRANSISTOR	1	
Q5410,11	2SA1022-C	TRANSISTOR	2	
Q5412,13	2SK508-B	TRANSISTOR	2	
Q5500	2SA1022-C	TRANSISTOR	1	
Q5501-04	2SD1979	TRANSISTOR	4	
Q5505,06	2SC2954	TRANSISTOR	2	
Q5507,08	2SC3130	TRANSISTOR	2	
Q5509	2SC2954	TRANSISTOR	1	
Q5510,11	2SA1022-C	TRANSISTOR	2	
Q5512,13	2SK508-B	TRANSISTOR	2	
Q5600,01	XN5531	TRANSISTOR-RESISTOR	2	
Q5700,01	XN5531	TRANSISTOR-RESISTOR	2	
R5100	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5101,02	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	2	
R5103	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R5104,05	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	2	
R5106-09	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R5200,01	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5202	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5203,04	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5205	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5206	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5207,08	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5209	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5210,11	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5212	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R5213	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5214	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R5215,16	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R5217	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5218	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5219,20	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	2	
R5221	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R5300	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R5302	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5303	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5304	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5305	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5306	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R5307	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5308	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5309,10	ERJ8GCYG101	M.RESISTOR CH 1/8W 100	2	
R5311	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5312	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5313	ERJ8GCYJ270	M.RESISTOR CH 1/8W 27	1	
R5314	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R5350	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R5352	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5353	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5354	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5355	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R5356	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R5357	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5358	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5359,60	ERJ8GCYG101	M.RESISTOR CH 1/8W 100	2	
R5361	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5362	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5363	ERJ8GCYJ270	M.RESISTOR CH 1/8W 27	1	
R5364	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R5400,01	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	2	
R5402-04	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R5405-08	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	4	
R5409-13	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	5	
R5414	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5415	ERJ8GCYJ221	M.RESISTOR CH 1/8W 220	1	
R5416	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5417	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5419	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5420,21	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	2	
R5424,25	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5426	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5427	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R5428	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5429	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R5430	ERJ12YJ270	M.RESISTOR CH 1/2W 270	1	
R5431	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R5432,33	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	2	
R5434	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5435	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5440	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5500,01	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	2	
R5502-04	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R5505-08	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	4	
R5509-13	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	5	
R5514	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5515	ERJ8GCYJ221	M.RESISTOR CH 1/8W 220	1	
R5516	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5517	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R5519	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R5520,21	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	2	
R5524,25	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5526	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5527	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R5528	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R5529	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R5530	ERJ12YJ270	M.RESISTOR CH 1/2W 270	1	
R5531	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R5532,33	ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	2	
R5534	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R5535	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5540	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R5600	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R5601,02	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5603,04	ERJ6GEYG391	M.RESISTOR CH 1/10W 390	2	
R5605,06	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R5607,08	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R5609,10	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R5611,12	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R5613,14	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5615-18	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
R5700	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R5701,02	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5703,04	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R5705	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R5706	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R5707,08	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R5709,10	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R5711,12	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R5713,14	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	2	
R5715-18	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	4	
TG5001,02	VJR0646	TEST POINT	2	
TP5001-04	VJR0646	TEST POINT	4	
		MISCELLANEOUS		
	VMP5846	RF HOLDER ANGLE	1	
	VYQ1745	RF SHIELD CASE (UPPER)	1	
	VSC4386	RF SHIELD CASE (MIDDLE)	1	
	XTV3+6FFR	SCREW	2	
	VSC4437	RF SHIELD CASE (LOWER)	1	
	VMZ2588	RF BARRIER	1	
	VEE9862	GND CABLE	1	
■E13	VEP80991A	AC HEAD I/F P.C.BOARD	1	(RTL)
P1	VJP2278	CONNECTOR (MALE)	1	
P2	VJP1881T	CONNECTOR (MALE)	1	
■E14	VEP83224A	V/S JACK P.C.BOARD	1	(RTL)
C1,C2	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4	ECA1CXS470	E.CAPACITOR 16V 47U	1	
C5,C6	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C8	ECA1CXS470	E.CAPACITOR 16V 47U	1	
C9,10	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C11	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C12,13	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C14	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C15,16	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C17	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C18,19	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C20	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C21,22	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C23	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C24,25	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C26	ECUX1H270JCV	C.CAPACITOR CH 50V 27P	1	
C27	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C28,29	ECA1CXS470	E.CAPACITOR 16V 47U	2	
C30	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C31,32	ECA1CXS470	E.CAPACITOR 16V 47U	2	
C33-38	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	6	
C50,51	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C203	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C204-27	ECUX1H102JCN	C.CAPACITOR CH 50V 1000P	24	
C240-42	ECA1CXS100	E.CAPACITOR 16V 10U	3	
C243	ECA1CXS470	E.CAPACITOR 16V 47U	1	
C244	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C250-57	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	8	
D1-D5	MA152K	DIODE	5	
D6-11	MA3130-L	DIODE	6	
D201,02	MA152K	DIODE	2	
IC1	NJM78L09UA	IC	1	
IC2	NJM79L09UA	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC3	NJM78L09UA	IC	1	
IC4	NJM79L09UA	IC	1	
IC5	NJM78L09UA	IC	1	
IC6	NJM79L09UA	IC	1	
IC201,02	MC14021BF	IC	2	
IC203	SN74S1051NS	IC	1	
IC205,06	MC14094BF	IC	2	
IC207	MC14050BF	IC	1	
IC208	MC14049UBF	IC	1	
IC209	NJM78L09UA	IC	1	
IC210	NJM79L09UA	IC	1	
J1,J2	VJS3902	CONNECTOR (FEMALE)	2	
J3	VJS3901	CONNECTOR (FEMALE)	1	
J4,J5	VJS3902	CONNECTOR (FEMALE)	2	
J14,15	VJP3414A009	CONNECTOR (MALE)	2	
J16	VJP3414A015	CONNECTOR (MALE)	1	
J17,18	VJP3414A025	CONNECTOR (MALE)	2	
L1	VLQEL05F101J	COIL 100UH	1	
P1	VJP3375A060	CONNECTOR (MALE)	1	
Q1	2SA1022-C	TRANSISTOR	1	
Q2	2SC2295-C	TRANSISTOR	1	
Q3	2SA1022-C	TRANSISTOR	1	
Q4	2SC2295-C	TRANSISTOR	1	
Q5	2SA1022-C	TRANSISTOR	1	
Q6	2SC2295-C	TRANSISTOR	1	
Q7	2SA1022-C	TRANSISTOR	1	
Q8	2SC2295-C	TRANSISTOR	1	
Q9	2SA1022-C	TRANSISTOR	1	
Q10	2SC2295-C	TRANSISTOR	1	
Q11	2SB709A-R	TRANSISTOR	1	
Q12,13	2SD601A-R	TRANSISTOR	2	
Q14	2SB709A-R	TRANSISTOR	1	
Q15,16	2SD601A-R	TRANSISTOR	2	
Q17	2SB709A-R	TRANSISTOR	1	
Q18,19	2SD601A-R	TRANSISTOR	2	
Q20	2SB709A-R	TRANSISTOR	1	
Q21,22	2SD601A-R	TRANSISTOR	2	
Q23	2SB709A-R	TRANSISTOR	1	
Q24,25	2SD601A-R	TRANSISTOR	2	
Q26	2SB709A-R	TRANSISTOR	1	
Q27,28	2SD601A-R	TRANSISTOR	2	
Q201-12	UN2214	TRANSISTOR-RESISTOR	12	
R1	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R2	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R3	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R4	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R5,R6	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R7	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R8	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R9	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R10	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R11	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R12	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R13,14	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R15	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R16	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R17	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R18	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R19	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R20	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R21,22	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R23	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R24	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R25	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R26	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R27	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R28	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R29,30	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R31	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R32	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R33	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R34	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R35	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R36	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R37,38	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	2	
R39	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R40	ERJ6GEYG330	M.RESISTOR CH 1/10W 33	1	
R41,42	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R43	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R44	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R45,46	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R47	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R48-50	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
R51	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R52	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R53,54	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R55	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R56-58	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
R59	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R60	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R61,62	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R63	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R64-66	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
R67	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R68	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R69,70	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R71	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R72-74	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
R75	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R76	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R77,78	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R79	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R80-82	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	3	
R83	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R84	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R85,86	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R87	ERJ6RED750	M.RESISTOR CH 1/10W 75	1	
R88	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R201,02	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	2	
R203	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R204	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R205	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R206	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R207	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R208	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R209-32	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	24	
R241	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R242	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R243	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
▪ R244	ERQ12HJ2R7	F.RESISTOR 1/2W 2.7	1	
R251-55	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	5	
SW1,W2	VSS0307	SWITCH	2	
		MISCELLANEOUS		
	VMP5684	P.C.BOARD ANGLE	1	
	VMP4866	D SUB ANGLE	1	
	VXQ0102	SCREW	10	
	XTN26+6FFZ	SCREW	4	
	XTN3+10JFZ	SCREW	5	
	XYE3+EF8	SCREW	2	
■E15	VEP81183A	POWER 1 P.C.BOARD	1	(RTL)
▪ C1101	ECQU2A224MV	P.CAPACITOR 100V 0.22U	1	
▪ C1102,03	VCK0262K471A	C.CAPACITOR 470P	2	
▪ C1104	ECQU2A474MV	P.CAPACITOR 100V 0.47U	1	
▪ C1105,06	VCK0262K101A	C.CAPACITOR 100P	2	
▪ C1107,08	VCK0260M152A	C.CAPACITOR 1500P	2	
▪ C1109	VCK0260M102A	C.CAPACITOR 1000P	1	
C1110,11	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C1112	VCK0293	C.CAPACITOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1115,16	VCK0106K471	C.CAPACITOR 470P	2	
C1117,18	ECEC2WC151EB	E.CAPACITOR 450V 150U	2	
C1119,20	VCK0106K471	C.CAPACITOR 470P	2	
C1121	ECA1HXLV100	E.CAPACITOR 50V 10U	1	
C1122	ECA1HXS100	E.CAPACITOR 50V 10U	1	
C1124,25	ECUM1E474ZFM	C.CAPACITOR CH 25V 0.47U	2	
C1126	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C1127	ECQV1H684JF	P.CAPACITOR 50V 0.68U	1	
C1128	ECA1HFQ101	E.CAPACITOR 50V 100U	1	
C1129	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C1130	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C1131	ECQF6222JZ	P.CAPACITOR 630V 2200P	1	
C1132,33	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C1134	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
D1101	RBV606	DIODE	1	
D1102	TM1661S-L	DIODE	1	
D1103	U1GU44	DIODE	1	
D1104	FML-36S	DIODE	1	
D1105,06	ERA15-08	DIODE	2	
D1107,08	MA3200-M	DIODE	2	
D1110	MA151K	DIODE	1	
D1111-13	U1GU44	DIODE	3	
D1114,15	MA3068-M	DIODE	2	
D1116	MA3200-M	DIODE	1	
D1117	MA151K	DIODE	1	
IC1101	MC33262P	IC	1	
IC1102	M51945BL	IC	1	
IC1103	M51953BL	IC	1	
▪ L1101	ELF18D850C	FILTER	1	
▪ L1102,03	ELF18D604F	FILTER	2	
L1105	VLQ0820	COIL	1	
P1101	VJP2638	CONNECTOR (MALE)	1	
P1102,03	VJP2639	CONNECTOR (MALE)	2	
P1104	VJP4033	CONNECTOR (MALE)	1	
Q1101,02	2SK1941-01R	TRANSISTOR	2	
Q1105	UN2213	TRANSISTOR-RESISTOR	1	
▪ R1101	ERC12AGM334	S.RESISTOR 1/2W 330K	1	
▪ R1102,03	ERU5TEJ100	F.RESISTOR 5W 10	2	
R1104	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1105,06	ERG2SJ220	M.RESISTOR 2W 22	2	
R1107	VRE0206	M.RESISTOR	1	
R1108	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
R1109	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R1110	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
R1111	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R1112	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
R1113	ERJ12YJ473	M.RESISTOR CH 1/2W 47K	1	
R1114	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R1115,16	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	2	
R1117,18	ERG3SJ333	M.RESISTOR 3W 33K	2	
R1119	ERJ6RBD273	M.RESISTOR CH 1/10W 27K	1	
R1120	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
R1122	ERJ12YJ473	M.RESISTOR CH 1/2W 47K	1	
R1123	ERJ14YJ474	M.RESISTOR CH 1/4W 470K	1	
R1125	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R1127	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R1129	ERJ14YJ474	M.RESISTOR CH 1/4W 470K	1	
R1130	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1131	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R1132	ERJ6GEYG470	M.RESISTOR CH 1/10W 47	1	
R1133	ERJ6GEYG390	M.RESISTOR CH 1/10W 39	1	
R1134,35	ERJ14YJ224	M.RESISTOR CH 1/4W 220K	2	
R1136	ERJ14YJ154	M.RESISTOR CH 1/4W 150K	1	
R1137	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R1138	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R1139-41	ERJ12YJ154	M.RESISTOR CH 1/2W 150K	3	
R1142	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R1143,44	ERJ12YJ224	M.RESISTOR CH 1/2W 220K	2	
R1145	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1146	VRT0142	THERMISTOR	1	
R1147	ERG2SJ471	M.RESISTOR 2W 470	1	
R1148-50	ERJ12YJ154	M.RESISTOR CH 1/2W 150K	3	
R1151	ERJ6RBD223	M.RESISTOR CH 1/10W 22K	1	
R1153,54	ERJ12YJ473	M.RESISTOR CH 1/2W 47K	2	
R1155,56	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R1158	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R1159	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1160	ERJ6RED224	M.RESISTOR CH 1/10W 220K	1	
R1161	ERJ6RBD104	M.RESISTOR CH 1/10W 100K	1	
R1162	ERJ6RED334	M.RESISTOR CH 1/10W 330K	1	
R1163	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R1165	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R1166	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
VR1102	VRV0109B501	V.RESISTOR 500	1	
		MISCELLANEOUS		
▪	VMZ0965	CAPACITOR COVER	3	
▪	VMZ1608	CAPACITOR COVER	4	
	VSC4708	HEAT SINK (A)	1	
	XYE3+EF8	SCREW	2	
	XYN3+F6FZS	SCREW	1	
	XYN3+F8	SCREW	5	
	XYN3+F10	SCREW	1	
	VJR1008	EARTH LUG	3	
■ E16	VEP81184B	POWER 2 P.C.BOARD	1	(RTL)
C1002,03	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	2	
C1004-07	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C1008	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C1009,10	ECA1HXLV220	E.CAPACITOR 50V 22U	2	
C1011	ECA1HXLV010	E.CAPACITOR 50V 1U	1	
C1012	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C1013	ECA1HXLV010	E.CAPACITOR 50V 1U	1	
C1015	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C1016	ECHU1H471GB	P.CAPACITOR 50V 470P	1	
C1017	ECUM1H104KBN	C.CAPACITOR CH 50V 0.1U	1	
C1018	ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C1019	ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C1020	ECUM1H104KBN	C.CAPACITOR CH 50V 0.1U	1	
C1021	ECHU1H471GB	P.CAPACITOR 50V 470P	1	
C1022	ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C1023	ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C1024	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C1026	ECUM1E474ZFM	C.CAPACITOR CH 25V 0.47U	1	
C1027,28	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C1040,41	EEUFA1A332LE	E.CAPACITOR 10V 3300U	2	
C1042	EEUFA1V471E	E.CAPACITOR 35V 470U	1	
C1043	EEUFA1E332E	E.CAPACITOR 25V 3300U	1	
C1044,45	EEUFA1C222LE	E.CAPACITOR 16V 2200P	2	
C1046	EEUFA1E681E	E.CAPACITOR 25V 680P	1	
C1047,48	ECA1CXL101	E.CAPACITOR 16V 100U	2	
C1049	ECA1VHG471	E.CAPACITOR 35V 100U	1	
C1050	ECA1EXLV101	E.CAPACITOR 25V 100U	1	
C1051-53	ECA1CXL101	E.CAPACITOR 16V 100U	3	
C1054	ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C1055	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C1056	ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C1059	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C1060	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C1062	VCK0106K151	C.CAPACITOR 150P	1	
C1063	ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1065	VCK0106K151	C.CAPACITOR 150P	1	
C1066	ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1067,68	ECQE6473KF	P.CAPACITOR 630V 0.047U	2	
C1069-75	ECKD2H101KB	C.CAPACITOR 500V 100P	7	
C1076-78	EEUFA1A822E	E.CAPACITOR 10V 8200P	3	
C1079	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C1080,81	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	2	
C1083	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1085	EEUFA1C222LE	E.CAPACITOR 16V 2200P	1	
C1086	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C1087	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C1088	EEUFA1A822E	E.CAPACITOR 10V 8200P	1	
C1089	ECA1HXS100	E.CAPACITOR 50V 10U	1	
C1090-93	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4	
C1094	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C1095	ECUM1E474ZFM	C.CAPACITOR CH 25V 0.47U	1	
C1096	ECA1CXL101	E.CAPACITOR 16V 100U	1	
C1097,98	ECUM1E474ZFM	C.CAPACITOR CH 25V 0.47U	2	
C1099	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D1001	MA151WK	DIODE	1	
D1004	MA151K	DIODE	1	
D1005	MA151WK	DIODE	1	
D1007	MA3082-H	DIODE	1	
D1008	MA3051-M	DIODE	1	
D1009	MA153	DIODE	1	
D1010	U1GU44	DIODE	1	
D1011	MA151K	DIODE	1	
D1012	MA3240-H	DIODE	1	
D1013,14	U1GU44	DIODE	2	
D1015	MA3240-H	DIODE	1	
D1017	U1GU44	DIODE	1	
D1018,19	MA3051-M	DIODE	2	
D1020-22	MA151K	DIODE	3	
D1023,24	MA3051-M	DIODE	2	
D1030	D30SC4M	DIODE	1	
D1031	FML-G12SP	DIODE	1	
D1032	RL4ZP	DIODE	1	
D1033,34	FML-G12SP	DIODE	2	
D1035	FMB-G14L	DIODE	1	
D1036	FML-G12SP	DIODE	1	
D1037,38	MA3075-M	DIODE	2	
D1039	MA3240-H	DIODE	1	
D1040	MA3160-L	DIODE	1	
D1041,42	MA3130-L	DIODE	2	
D1043	MA3160-L	DIODE	1	
D1044,45	U05NU44	DIODE	2	
D1046	EG01C	DIODE	1	
D1047	U1GU44	DIODE	1	
D1048	MA3240-H	DIODE	1	
D1049	EG01C	DIODE	1	
D1050	U1GU44	DIODE	1	
D1051	MA3240-H	DIODE	1	
D1052	MA151K	DIODE	1	
IC1001,02	FA5311BP	IC	2	
IC1011,12	UPC1093J	IC	2	
IC1013	UPC393C	IC	1	
IC1014	PQ30RV31	IC	1	
J1001	VWJ0121	CABLE	1	
L1012	VLQ0479	COIL	1	
L1013	VLQ0605	COIL	1	
L1014	VLQ0655K220	COIL 22UH	1	
L1015,16	VLQ0605	COIL	2	
L1017	VLQ0354	COIL	1	
L1018	VLQ0655K220	COIL 22UH	1	
L1019	VLP0074	COIL	1	
L1021,22	VLP0074	COIL	2	
P1011	VJP2824B003	CONNECTOR (MALE)	1	
P1012	VJP2824B009	CONNECTOR (MALE)	1	
P1013	VJP2824B008	CONNECTOR (MALE)	1	
P1014	VJP1243T	CONNECTOR (MALE) 3P	1	
P1015	VJP4033	CONNECTOR (MALE)	1	
Q1002,03	2SD1478-R	TRANSISTOR	2	
Q1004	2SB710-R	TRANSISTOR	1	
Q1005	UN2213	TRANSISTOR-RESISTOR	1	
Q1006,07	2SB709-R	TRANSISTOR	2	
Q1011,12	2SK2258-01	TRANSISTOR	2	
▪ Q1013-15	PS2561L1V1WL	TRANSISTOR	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q1017	UN2214	TRANSISTOR-RESISTOR	1	
Q1018	UN2211	TRANSISTOR-RESISTOR	1	
Q1019	UN2111	TRANSISTOR-RESISTOR	1	
▪ Q1020	PS2561L1V1WL	TRANSISTOR	1	
Q1022	UN2113	TRANSISTOR-RESISTOR	1	
Q1023	UN2213	TRANSISTOR-RESISTOR	1	
Q1024	UN2214	TRANSISTOR-RESISTOR	1	
R1001-05	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	5	
R1006	ERG2SJ681	M.RESISTOR 2W 680	1	
R1007,08	ERJ6GEYG105	M.RESISTOR CH 1/10W 1M	2	
R1009	ERJ14YJ4R7	M.RESISTOR CH 1/4W 4.7	1	
R1010	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1011	ERJ6RBD241	M.RESISTOR CH 1/10W 240	1	
R1012,13	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	2	
R1014	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R1016	ERJ14YJ4R7	M.RESISTOR CH 1/4W 4.7	1	
R1017	ERJ6RBD241	M.RESISTOR CH 1/10W 240	1	
R1018,19	ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2M	2	
R1020	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
R1021	ERG3SJ333	M.RESISTOR 3W 33K	1	
R1023,24	ERJ12YJ154	M.RESISTOR CH 1/2W 150K	2	
R1026	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R1027	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	1	
R1028	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R1029	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R1030	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R1031	ERJ14YJ100	M.RESISTOR CH 1/4W 10	1	
R1033,34	ERJ12YJ154	M.RESISTOR CH 1/2W 150K	2	
R1036	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1037	ERJ6RBD472	M.RESISTOR CH 1/10W 4.7K	1	
R1038	ERJ6GEYG471	M.RESISTOR CH 1/10W 470	1	
R1039	ERJ6RBD681	M.RESISTOR CH 1/10W 680	1	
R1040,41	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	2	
R1042	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R1043	ERJ6RBD621	M.RESISTOR CH 1/10W 620	1	
R1044	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R1046,47	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	2	
R1048,49	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R1050	ERG2SJ470	M.RESISTOR 2W 47	1	
R1051,52	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	2	
R1053	ERJ6RBD182	M.RESISTOR CH 1/10W 1.8K	1	
R1054	ERG2SJ470	M.RESISTOR 2W 47	1	
R1055	VRT0142	THERMISTOR	1	
R1056	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R1057	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1058	ERJ6RBD362	M.RESISTOR CH 1/10W 3.6K	1	
R1059	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R1060	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1061	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1062	VRT0033	THERMISTOR	1	
R1063	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R1064,65	ERG2SJ681	M.RESISTOR 2W 680	2	
R1066	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R1067	ERJ6GEYG121	M.RESISTOR CH 1/10W 120	1	
R1068	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1069	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R1070	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R1071	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1072	ERG3SJ333	M.RESISTOR 3W 33K	1	
R1073	ERG2SJ180	M.RESISTOR 2W 18	1	
R1074	ERJ14YJ390	M.RESISTOR 1/4W 39	1	
R1075	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1076	ERW1PKR33	W.RESISTOR 1W 0.33	1	
R1077	ERG3SJ333	M.RESISTOR 3W 33K	1	
R1078	ERG2SJ180	M.RESISTOR 2W 18	1	
R1079	ERJ14YJ220	M.RESISTOR CH 1/4W 22	1	
R1080	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R1081	ERW1PKR33	W.RESISTOR 1W 0.33	1	
R1082,83	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R1084	ERJ6RBD132	M.RESISTOR CH 1/10W 1.3K	1	
R1085,86	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R1087	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1088	VRE0206	M.RESISTOR	1	
R1089	ERJ14YJ154	M.RESISTOR CH 1/4W 150K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1090	ERJ6RBD122	M.RESISTOR CH 1/10W 1.2K	1	
R1091,92	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R1093,94	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R1095	ERX2SZJR10	M.RESISTOR 2W 0.1	1	
R1097	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R1098	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1099	ERG3SJ333	M.RESISTOR 3W 33K	1	
▪ T1001	VLT0899	TRANSFORMER	1	
▪ T1002	VLT0900	TRANSFORMER	1	
VR1001,02	VRV0112B501	V.RESISTOR 500	2	
		MISCELLANEOUS		
	VLP0394	FERRITE BEAD	8	
	VLP0337	AMORPHOUS BEAD	2	
	VLP0394	FERRITE BEAD	3	
	VSC4779	HEAT SINK (E)	1	
	VSC4778	HEAT SINK (F)	1	
	XYN3+F8	SCREW	13	
	XYN3+F6	SCREW	2	
	VJR1008	EARTH LUG	2	
	XYN3+F10	SCREW	2	
	XYE3+EF8	SCREW	4	
	VSC4707	HEAT SINK	1	
	VMZ2779	INSULATION	1	
	VEE0C18	GND CABLE	1	
	VSC4780	HEAT SINK (D)	1	
	VMZ2919	SHEET	2	
■E17	VEP80A58A	POWER INT P.C.BOARD	1	(RTL)
		MISCELLANEOUS		
	VJS4033	CONNECTOR	2	
■E18	VEP84183A	A JACK P.C.BOARD	1	(RTL)
C1,C2	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C5-C8	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C11-14	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
J1,J2	VJS3417	CONNECTOR (FEMALE)	2	
J5,J6	VJS3417	CONNECTOR (FEMALE)	2	
J7,J8	VJP3417	CONNECTOR (MALE)	2	
J11-14	VJP3417	CONNECTOR (MALE)	4	
P1	VJP3375A060	CONNECTOR (MALE)	1	
R1	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R5	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R7	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R17	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R19	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R21	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R23	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R25	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R27	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R29	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R31	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R41	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R43	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R45	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R47	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R49	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R51	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R53	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R55	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		MISCELLANEOUS		
	VMP4867	XLR GUIDE ANGLE (A)	1	
	XYN26+F8	SCREW	2	
■E19	VEP84187A	AES/EBU P.C.BOARD	1	(RTL)
J1	VJS3417	CONNECTOR (FEMALE)	1	
J2	VJP3417	CONNECTOR (MALE)	1	
P1	VJP1246T	CONNECTOR (MALE) 6P	1	
■E20	VEP80A76A	UP FRONT 1 P.C.BOARD	1	(RTL)
C1	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C2-C5	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C6	ECA1CXS100	E.CAPACITOR 16V 10U	1	
D1-15	LN31GPHL	LED	15	
D16	LN41YPHL	LED	1	
D17	LN81RCPHL	LED	1	
D18	LN31GPHL	LED	1	
D19,20	MA152K	DIODE	2	
D21	LN31GPHL	LED	1	
IC1	MC14050BF	IC	1	
IC2	MC14049UBF	IC	1	
IC3,C4	MC14094BF	IC	2	
P1	VJP1248T	CONNECTOR (MALE) 8P	1	
P2	VJP1246T	CONNECTOR (MALE) 6P	1	
Q1-13	2SD601A-R	TRANSISTOR	13	
R1,R2	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	2	
R3,R4	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R5,R6	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	2	
R7	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R8	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R9	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R10	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R11	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R12	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R13,14	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R15	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R16	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R17,18	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R19	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R20	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R21,22	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R23	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R24	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R25,26	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R27	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R28	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R29,30	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R31	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R32	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R33,34	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R35,36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R37,38	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	2	
R39	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R40	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R41	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R42	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R43	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R44	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R45	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R46	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R47	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R48,49	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	

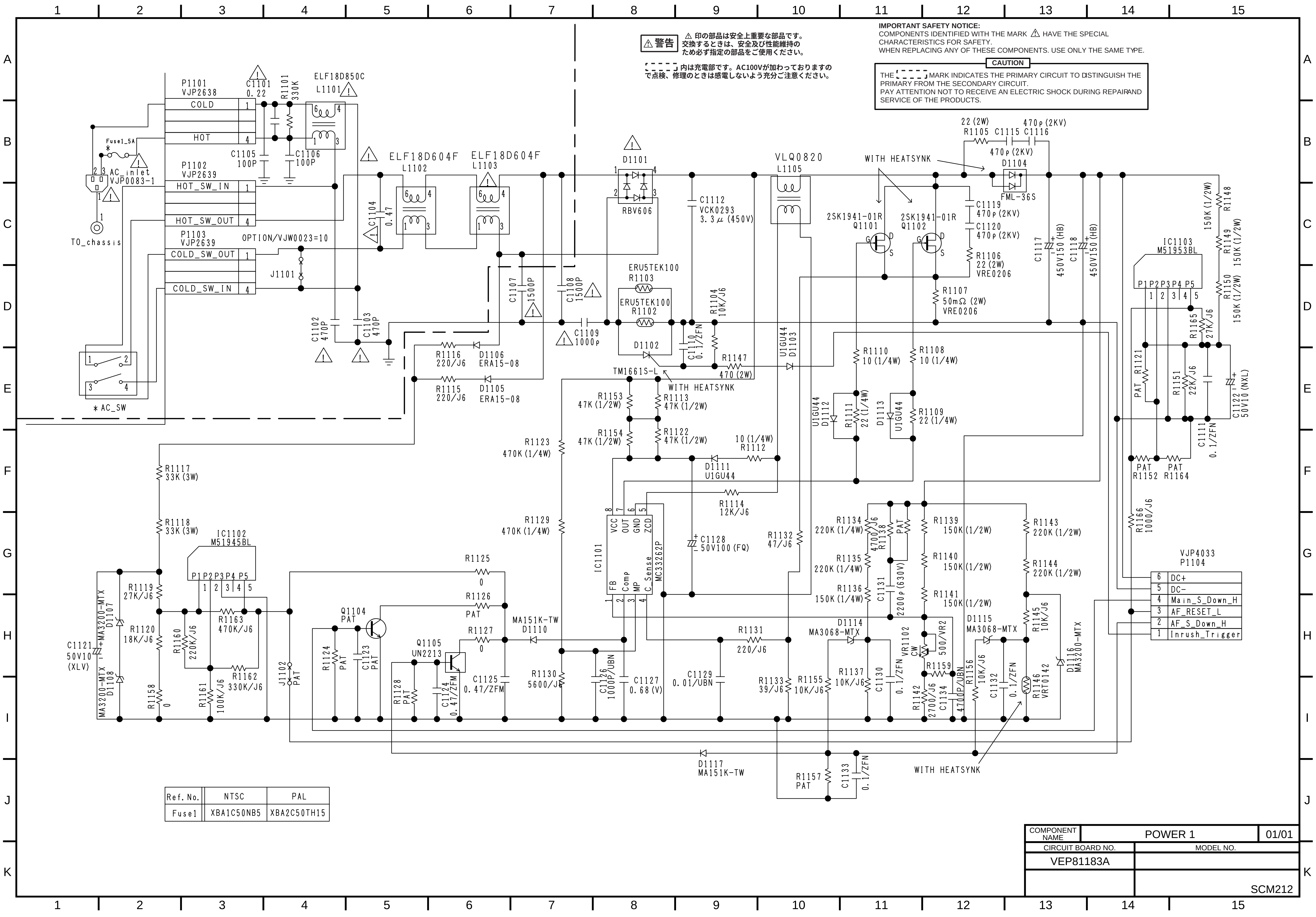
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R50	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R51	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R52	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R53	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R54	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R55	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R56-58	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	3	
SW1	EVQQS205K	SWITCH	1	
SW2	EVQQS307K	SWITCH	1	
		MISCELLANEOUS		
	VGQ2507	LED SPACER	19	
■E21	VEP80852A	UP FRONT 2 P.C.BOARD	1	(RTL)
D1	VLL0029	LED	1	
P1	VJP1246T	CONNECTOR (MALE) 6P	1	
SW1	VSP0864C001	SWITCH	1	
■E22	VEP86263B	FRONT CPU P.C.BOARD	1	(RTL)
C1	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C2	ECEV1HV2R2Q	E.CAPACITOR CH 50V 2.2U	1	
C3	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4,C5	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	2	
C6	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C7-14	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	8	
C15	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C16,17	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C20,21	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C22-25	ECUX1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C26,27	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C28-37	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	10	
C38,39	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C40-42	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C43-47	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C48-51	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C52-69	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	18	
C70	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
C71	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C72	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
C73-75	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C76	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
C77,78	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C79	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
C80-82	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C84-86	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	3	
C88,89	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
D1-D8	MA152WK	DIODE	8	
DP1	VEQ1847	DISPLAY TUBE	1	
FL1-L4	VLF1016A470	FILTER	4	
IC1	HD64180ZRP10	IC	1	
IC2	VSI2687	IC	1	
IC3	K6256DLG7L	IC	1	
IC4	TL7705CPSB	IC	1	
IC5	74F32SJ	IC	1	
IC6	MC74HC161AF	IC	1	
IC13	MC74HC04AF	IC	1	
IC14	TE7751	IC	1	
IC15	MC74HC138AF	IC	1	
IC16	MC74HC32AF	IC	1	
IC17	SN75C1168NS	IC	1	
IC18	MC74HC4538AF	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC20,21	NJM78L05UA	IC	2	
IC22	MC14015BF	IC	1	
IC23	UPC339G2	IC	1	
IC24	MC74HC04AF	IC	1	
IC25	MC74HC11F	IC	1	
IC26	MC14013BF	IC	1	
IC27	UPD71055GB	IC	1	
IC28,29	MC14516BF	IC	2	
IC30	TLC549IPS	IC	1	
IC31	MC74HC4051F	IC	1	
IC32	TLC549IPS	IC	1	
IC33	MC74HC4051F	IC	1	
IC34-41	NJM2904M	IC	8	
IC42	MC74HC11F	IC	1	
IC43	MC74HC32AF	IC	1	
IS2	VJS2336A032	CONNECTOR (FEMALE)	1	
L1,L2	VLP0133	COIL	2	
P1,P2	VJP1942T	CONNECTOR (MALE)	2	
P3,P4	VJP3440A016	CONNECTOR (MALE)	2	
P5	VJP2891A016	CONNECTOR (MALE)	1	
P6	VJS3281A020	CONNECTOR (FEMALE)	1	
P7	VJS2698A028	CONNECTOR (FEMALE)	1	
P8	VJP1233T	CONNECTOR (MALE) 6P	1	
R1	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R2-R7	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	6	
R8-15	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R16	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R17	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R18,19	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R20	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R21-36	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	16	
R37-41	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	5	
R42,43	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R44	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R45-47	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	3	
R48	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R49,50	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	2	
R51-54	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	4	
R55-58	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R59-63	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	5	
R64	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R65-69	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	5	
R70-98	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	29	
R99,00	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R101-04	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	4	
R105-07	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R128,29	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
R131-56	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	26	
R157	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R158-65	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	8	
R200,01	ERDS2TJ121	C.RESISTOR 1/4W 120	2	
SW1	VSS0184	SWITCH	1	
X1	VSX0641	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VMX2507	SPACER	2	
	XYN3+K8	SCREW	2	
■E23	VEP86148A	FRONT CPU SUB P.C.BOARD	1	(RTL)
P1	VJS3406B028	CONNECTOR (FEMALE)	1	
R2-R5	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
SW1-10	VSS0391	SWITCH	10	
SW11-13	VSP1013	SWITCH	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR2-R5	VRV0273	V.RESISTOR	4	
■E24	VEP80A49B	FRONT SW P.C.BOARD	1	(RTL)
C1	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4,C5	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C7-11	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	5	
C13	ECEA0JGE102	E.CAPACITOR 6.3V 1000U	1	
C14	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C16	ECEV1HV4R7Q	E.CAPACITOR CH 50V 4.7U	1	
C17	ECUX1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C18	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C19	ECEA1AGE331	E.CAPACITOR 10V 330U	1	
C20	ECEA1HGE470	E.CAPACITOR 50V 47U	1	
C30,31	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
D2-D5	LN38GCPP	LED	4	
D6	LN28RCPP	LED	1	
D7	LN38GCPP	LED	1	
D8	LN48YCPP	LED	1	
D9	LN38GCPP	LED	1	
D10	LN48YCPP	LED	1	
D12	LN48YCPP	LED	1	
D13-16	LN38GCPP	LED	4	
D17-25	MA152WA	DIODE	9	
D26,27	MA152A	DIODE	2	
D28-38	MA152WA	DIODE	11	
D39	MA152A	DIODE	1	
D40	MA152WA	DIODE	1	
D44	MA4300	DIODE	1	
D45	MA166	DIODE	1	
D46	MA701A	DIODE	1	
D47	MA4030M	DIODE	1	
DP1	VSL0462	DISPLAY TUBE	1	
F1	EYP2BN135	FUSE	1	
IC1	UPD71055GB	IC	1	
IC2,C3	MC74HC138AF	IC	2	
IC5-C9	MC74HC273AF	IC	5	
IC11	UPD16310GF	IC	1	
P1,P2	VJP1986T	CONNECTOR (MALE)	2	
Q45,46	2SC1815Y	TRANSISTOR	2	
Q47	2SC3074Y	TRANSISTOR	1	
Q48-53	2SB709A-R	TRANSISTOR	6	
QR1-40	UN2214	TRANSISTOR-RESISTOR	40	
R4-11	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	8	
R12-14	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	3	
R15-19	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	5	
R20-26	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	7	
R27-29	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	3	
R30-34	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	5	
R35-42	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	8	
R43-50	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	8	
R51-53	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	3	
R110	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R111	ERDS2TJ682	C.RESISTOR 1/4W 6.8K	1	
R112	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
R113	ERDS2TJ221	C.RESISTOR 1/4W 220	1	
R114	ERDS2TJ220	C.RESISTOR 1/4W 22	1	
R115	ERJ8GCYJ103	M.RESISTOR CH 1/8W 10K	1	
R120	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R121-28	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	8	
R129-40	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	12	
R141	ERJ6GEYG181	M.RESISTOR CH 1/10W 180	1	
R142	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R143-45	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
SW1	VSP0791	SWITCH	1	
SW2	VSP0788	SWITCH	1	
SW3	VSP0792	SWITCH	1	
SW4	VSP0789	SWITCH	1	
SW5	VSP0790	SWITCH	1	
SW6,W7	VSP0795	SWITCH	2	
SW8-10	VSP0864A000	SWITCH	3	
SW11,12	VSP0795	SWITCH	2	
SW13	VSP0998	SWITCH	1	
SW14	VSP0864A039	SWITCH	1	
SW15	VSP0999A001	SWITCH	1	
SW16	VSP0864A038	SWITCH	1	
SW18	VSP0853A000	SWITCH	1	
SW20-24	VSP0853A000	SWITCH	5	
SW25	VSP0997A002	SWITCH	1	
SW26	VSP0997A001	SWITCH	1	
SW27-31	VSS0226	SWITCH	5	
SW32	VSP1005	SWITCH	1	
SW34	VSP1005	SWITCH	1	
SW36-41	VSP1005	SWITCH	6	
SW42	VSP0864A048	SWITCH	1	
SW43	VSP0864A049	SWITCH	1	
TR1	VLT0869	TRANSFORMER	1	
		MISCELLANEOUS		
	VJF1258	HOLDER	1	
	VMX2147	SPACER	14	
■E25	VEP80963C	FRONT VR 1 P.C.BOARD	1	(RTL)
P1	VJP3440A016	CONNECTOR (MALE)	1	
R1,R2	ERDS2TJ101	C.RESISTOR 1/4W 100	2	
R4,R5	ERDS2TJ101	C.RESISTOR 1/4W 100	2	
R6	ERDS2TJ220	C.RESISTOR 1/4W 22	1	
VR1,R2	EVU023003B14	V.RESISTOR 10K	2	
VR4,R5	EVU023003B14	V.RESISTOR 10K	2	
VR6	EWVBB6018B14	V.RESISTOR 10K	1	
		MISCELLANEOUS		
	VEE8380	FRONT VR1 CABLE	1	
■E26	VEP80964C	FRONT VR 2 P.C.BOARD	1	(RTL)
FL1-L3	VLF1356	FILTER	3	
J1	VJJ0378	M6 JACK	1	
P1	VJP3440A016	CONNECTOR (MALE)	1	
R1,R2	ERDS2TJ101	C.RESISTOR 1/4W 100	2	
R4	ERDS2TJ101	C.RESISTOR 1/4W 100	1	
VR1,R2	EVU023006B14	V.RESISTOR 10K	2	
VR4	EVU023006B14	V.RESISTOR 10K	1	
		MISCELLANEOUS		
	VEE9639	FRONT VR CABLE	1	
	VEE4187	EARTH LUG	1	
	VMC1321	EARTH METAL	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■E27	VEP82216B	MECHA I/F P.C.BOARD	1	(RTL)
C1	ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C2-C5	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	4	
C6	ECEV1CV220Q	E.CAPACITOR CH 16V 22U	1	
C7	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C9,10	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	2	
C11	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C12	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C13,14	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	2	
C15	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C20	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C21	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C22	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C23	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C100	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C101	ECEV1CV470Q	E.CAPACITOR CH 16V 47U	1	
C102	ECA1HEN101	E.CAPACITOR 50V 100U	1	
C103	ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C104	ECEV1CV100Q	E.CAPACITOR CH 16V 10U	1	
C200-02	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	3	
D1	MA157	DIODE	1	
D100-02	MA738	DIODE	3	
IC1,C2	0P177GS	IC	2	
IC3	NJM4580ED	IC	1	
IC4-C6	UPC4558G2	IC	3	
IC10	NJM78L09UA	IC	1	
IC11	NJM79L09UA	IC	1	
IC100	MC14538BF	IC	1	
L1,L2	VLF1016A470	FILTER	2	
L100	VLP0133	COIL	1	
P1	VJP2891A030	CONNECTOR (MALE)	1	
P2	VJP3418A080	CONNECTOR (MALE)	1	
P11	VJP3172D002	CONNECTOR (MALE)	1	
P12	VJP3172D005	CONNECTOR (MALE)	1	
P13	VJP3172D002	CONNECTOR (MALE)	1	
P14	VJP3172D003	CONNECTOR (MALE)	1	
P15	VJP3518B002	CONNECTOR (MALE)	1	
P16	VJP3518B003	CONNECTOR (MALE)	1	
P17	VJS3801B010	CONNECTOR (FEMALE)	1	
P18	VJP3518B002	CONNECTOR (MALE)	1	
P19	VJP3172D002	CONNECTOR (MALE)	1	
P20	VJP3518B003	CONNECTOR (MALE)	1	
P21	VJP3518B002	CONNECTOR (MALE)	1	
P22	VJP3172D004	CONNECTOR (MALE)	1	
P24	VJP3518B002	CONNECTOR (MALE)	1	
P25	VJP1230T	CONNECTOR (MALE) 3P	1	
P26	VJP1236T	CONNECTOR (MALE) 9P	1	
P30	VJP3172D003	CONNECTOR (MALE)	1	
P32	VJP3172D004	CONNECTOR (MALE)	1	
P33	VJS3406B015	CONNECTOR (FEMALE)	1	
P34,35	VJS2889A017	CONNECTOR (FEMALE)	2	
P36	VJS3406B019	CONNECTOR (FEMALE)	1	
P41	VJP3172D002	CONNECTOR (MALE)	1	
P48	VJP3125B002	CONNECTOR (MALE)	1	
Q1	2SB1218A-R	TRANSISTOR	1	
Q100,01	2SB766-R	TRANSISTOR	2	
QR100,01	UN2214	TRANSISTOR-RESISTOR	2	
R1	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R2,R3	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	2	
R4	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R5	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R6	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R7	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R8	ERJ3RBD333	M.RESISTOR CH 1/16W 33K	1	
R9	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R10	ERJ3RBD562	M.RESISTOR CH 1/16W 5.6K	1	
R11	ERJ3RBD473	M.RESISTOR CH 1/16W 47K	1	
R12,13	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	2	
R14	ERJ6RBD104	M.RESISTOR CH 1/10W 100K	1	
R15	ERJ6RBD823	M.RESISTOR CH 1/10W 82K	1	
R16	ERJ6RBD273	M.RESISTOR CH 1/10W 27K	1	
R17	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R18	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R19	ERJ6RBD103	M.RESISTOR CH 1/10W 10K	1	
R20	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R21	ERJ6RBD183	M.RESISTOR CH 1/10W 18K	1	
R22	ERJ6RBD473	M.RESISTOR CH 1/10W 47K	1	
R23	ERJ6RBD682	M.RESISTOR CH 1/10W 6.8K	1	
R24	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R25	ERJ6RBD391	M.RESISTOR CH 1/10W 390	1	
R36,37	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R100	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R101	ERJ8GCYJ102	M.RESISTOR CH 1/8W 1K	1	
R102	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R103	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R104	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R105	ERJ8GCYJ102	M.RESISTOR CH 1/8W 1K	1	
R200	ERJ6GEYG752	M.RESISTOR CH 1/10W 7.5K	1	
R201	ERJ6GEYG242	M.RESISTOR CH 1/10W 2.4K	1	
R202	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R203	ERJ6GEYG752	M.RESISTOR CH 1/10W 7.5K	1	
R204	ERJ6GEYG242	M.RESISTOR CH 1/10W 2.4K	1	
R205	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
SW200	VSS023706	SWITCH	1	
VR1	EVMEGSA00B24	V.RESISTOR 20K	1	
VR2	EVMEGSA00B54	V.RESISTOR 50K	1	
■E28	VEP80856A	CARRIGE P.C.BOARD	1	(RTL)
P1	VJP1249T	CONNECTOR (MALE) 9P	1	
P2	VJS2889A012	CONNECTOR (FEMALE)	1	
P3	VJS2889A016	CONNECTOR (FEMALE)	1	
R1-R7	ERDS2TJ221	C.RESISTOR 1/4W 220	7	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R1101
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100P
C1106
100P
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ERA15-08
R1115
220/J6
D1105
ERA15-08
D1101
RBV606
C1112
VCK0293
3.3μ(450V)
ERU5TEK100
R1103
ERU5TEK100
R1102
D1102
TM1661S-L
WITH HEATSYNK
R1104
10K/J6
C1110
0.1/ZFN
R1147
470(2W)
VLQ0820
L1105
U1GU44
D1103
WITH HEATSYNK
2SK1941-01R
Q1101
2SK1941-01R
Q1102
22(2W)
R1105
C1115
C1116
470p(2KV)
470p(2KV)
D1104
FML-36S
C1119
470p(2KV)
C1120
470p(2KV)
R1106
22(2W)
VRE0206
R1107
50mΩ(2W)
VRE0206
C1117
450V150(HB)
C1118
450V150(HB)
R1148
150K(1/2W)
R1149
150K(1/2W)
R1150
150K(1/2W)
IC1103
M51953BL
R1165
27K/J6
R1121
PAT
R1151
22K/J6
C1122
50V10(NXL)
C1111
0.1/ZFN
R1152
PAT
R1164
PAT
R1166
1000/J6
R1110
10(1/4W)
R1108
10(1/4W)
U1GU44
D1112
R1111
22(1/4W)
D1113
U1GU44
R1109
22(1/4W)
R1153
47K(1/2W)
R1113
47K(1/2W)
R1154
47K(1/2W)
R1122
47K(1/2W)
R1123
470K(1/4W)
10(1/4W)
R1112
D1111
U1GU44
R1114
12K/J6
IC1101
MC33262P
VCC
OUT
GND
ZCD
FB
Comp
MP
C_Sense
C1128
50V100(FQ)
R1132
47/J6
R1129
470K(1/4W)
R1117
33K(3W)
R1118
33K(3W)
IC1102
M51945BL
R1119
27K/J6
D1107
MA3200-MTX
C1121
50V10
(XLV)
D1108
MA3200-MTX
R1120
18K/J6
R1160
220K/J6
R1163
470K/J6
R1162
330K/J6
R1161
100K/J6
R1158
0
J1102
PAT
R1125
0
R1126
PAT
Q1104
PAT
R1124
PAT
C1123
PAT
R1127
0
Q1105
UN2213
R1128
PAT
C1124
0.47/ZFM
C1125
0.47/ZFM
MA151K-TW
D1110
R1130
5600/J6
C1126
1000P/UBN
C1127
0.68(V)
C1129
0.01/UBN
R1131
220/J6
R1133
39/J6
R1155
10K/J6
R1134
220K(1/4W)
R1138
PAT
R1135
220K(1/4W)
R1136
150K(1/4W)
C1131
2200p(630V)
D1114
MA3068-MTX
R1137
10K/J6
C1130
0.1/ZFN
R1142
2700/J6
C1134
4700P/UBN
R1139
150K(1/2W)
R1140
150K(1/2W)
R1141
150K(1/2W)
VR1102
CW
500/VR2
R1159
D1115
MA3068-MTX
R1156
10K/J6
C1132
0.1/ZFN
R1146
VRT0142
R1143
220K(1/2W)
R1144
220K(1/2W)
R1145
10K/J6
D1116
MA3200-MTX
WITH HEATSYNK
D1117
MA151K-TW
R1157
PAT
C1133
0.1/ZFN
VJP4033
P1104
DC+
DC-
Main_S_Down_H
AF_RESET_L
AF_S_Down_H
Inrush_Trigger

⚠ 警告 ⚠ 印の部品は安全上重要な部品です。
交換するときは、安全及び性能維持の
ため必ず指定の部品をご使用ください。

┌ ─ ─ ┐ 内は充電部です。AC100Vが加わっておりますの
で点検、修理のときは感電しないよう充分ご注意ください。

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL
CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE SAME TYPE.

CAUTION

THE ┌ ─ ─ ┐ MARK INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

Ref. No.	NTSC	PAL
Fuse1	XBA1C50NB5	XBA2C50TH15

COMPONENT NAME	POWER 1	01/01
CIRCUIT BOARD NO.	MODEL NO.	
VEP81183A		
	SCM212	

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IMPORTANT SAFETY NOTICE:
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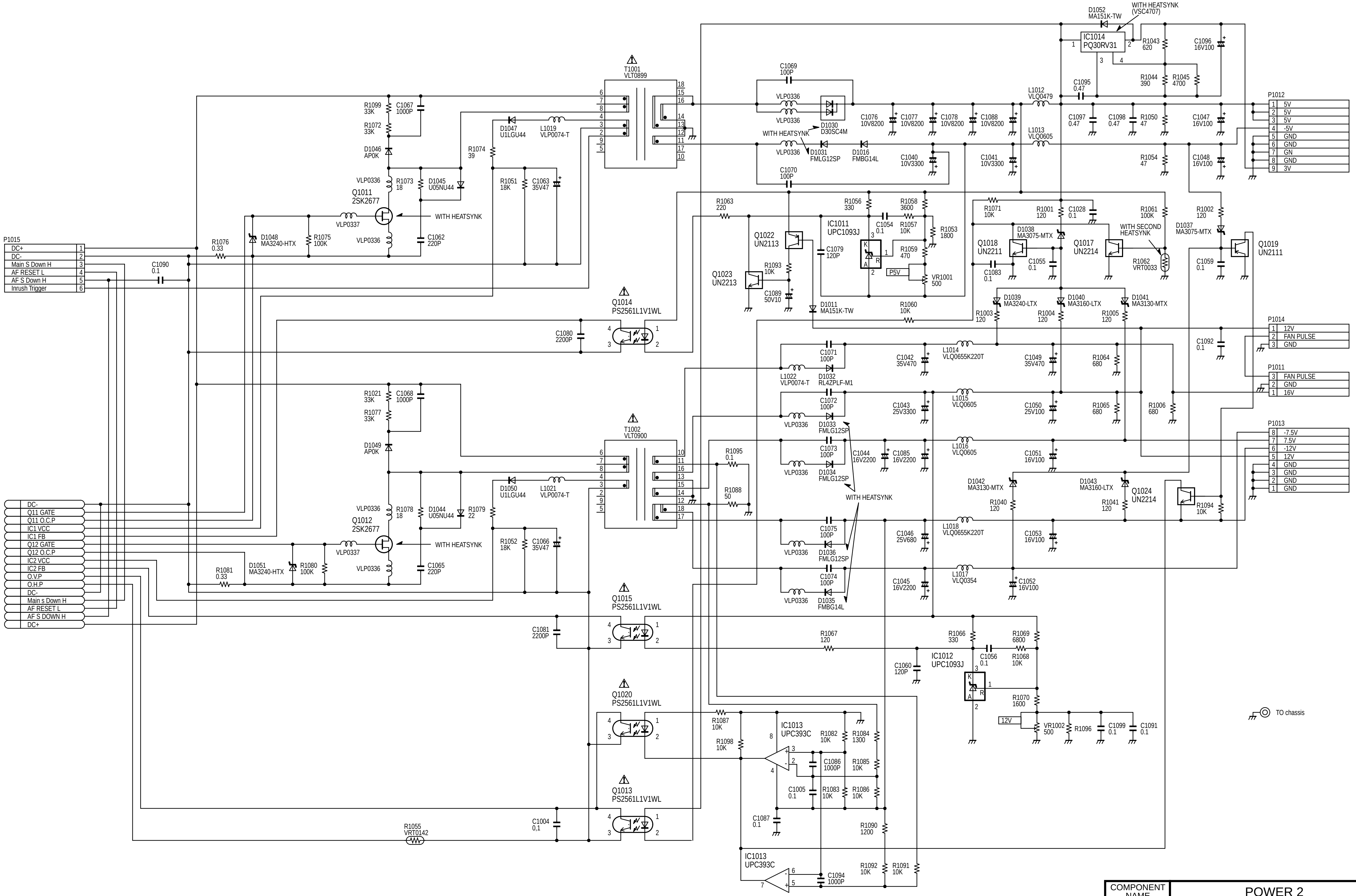
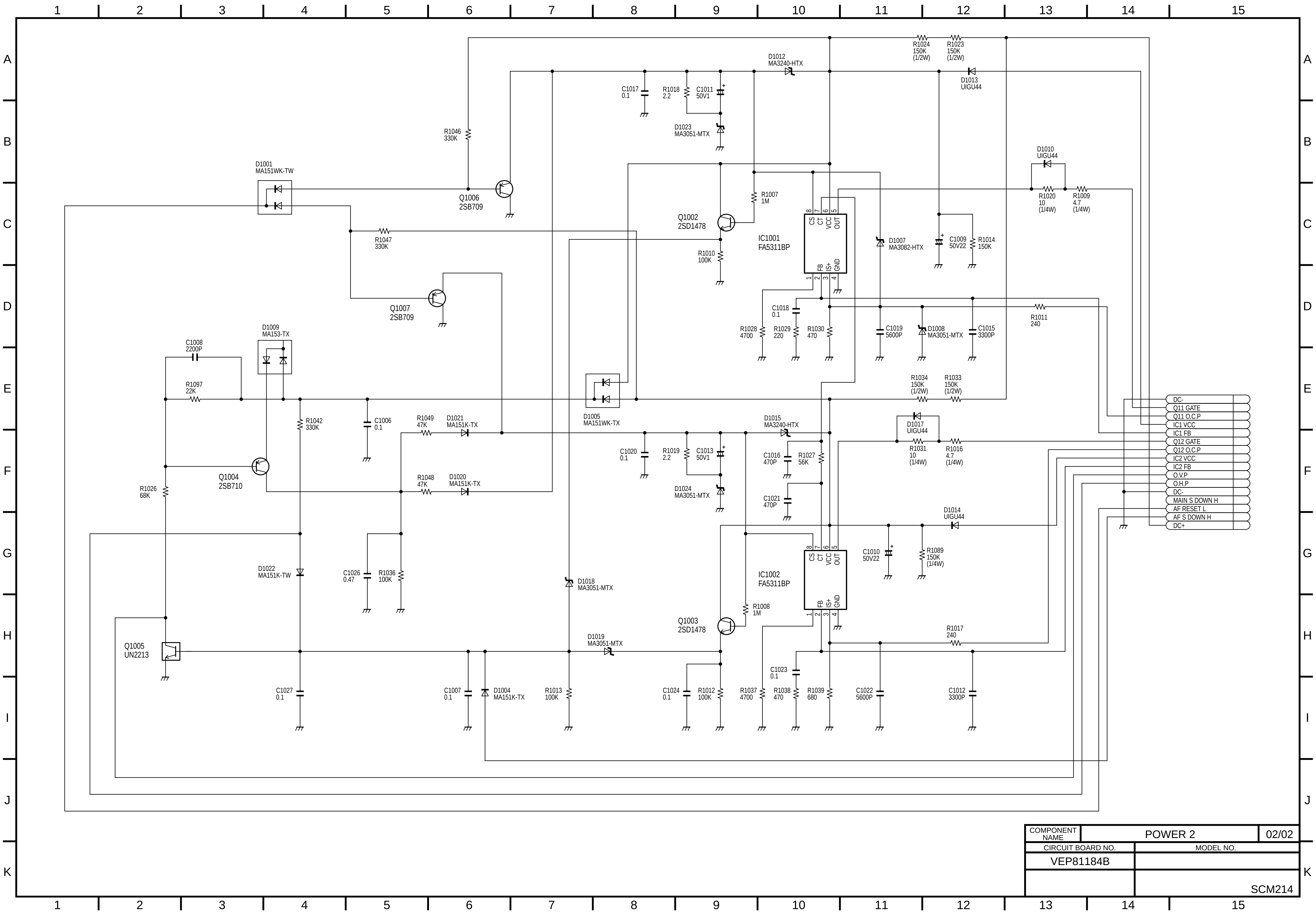
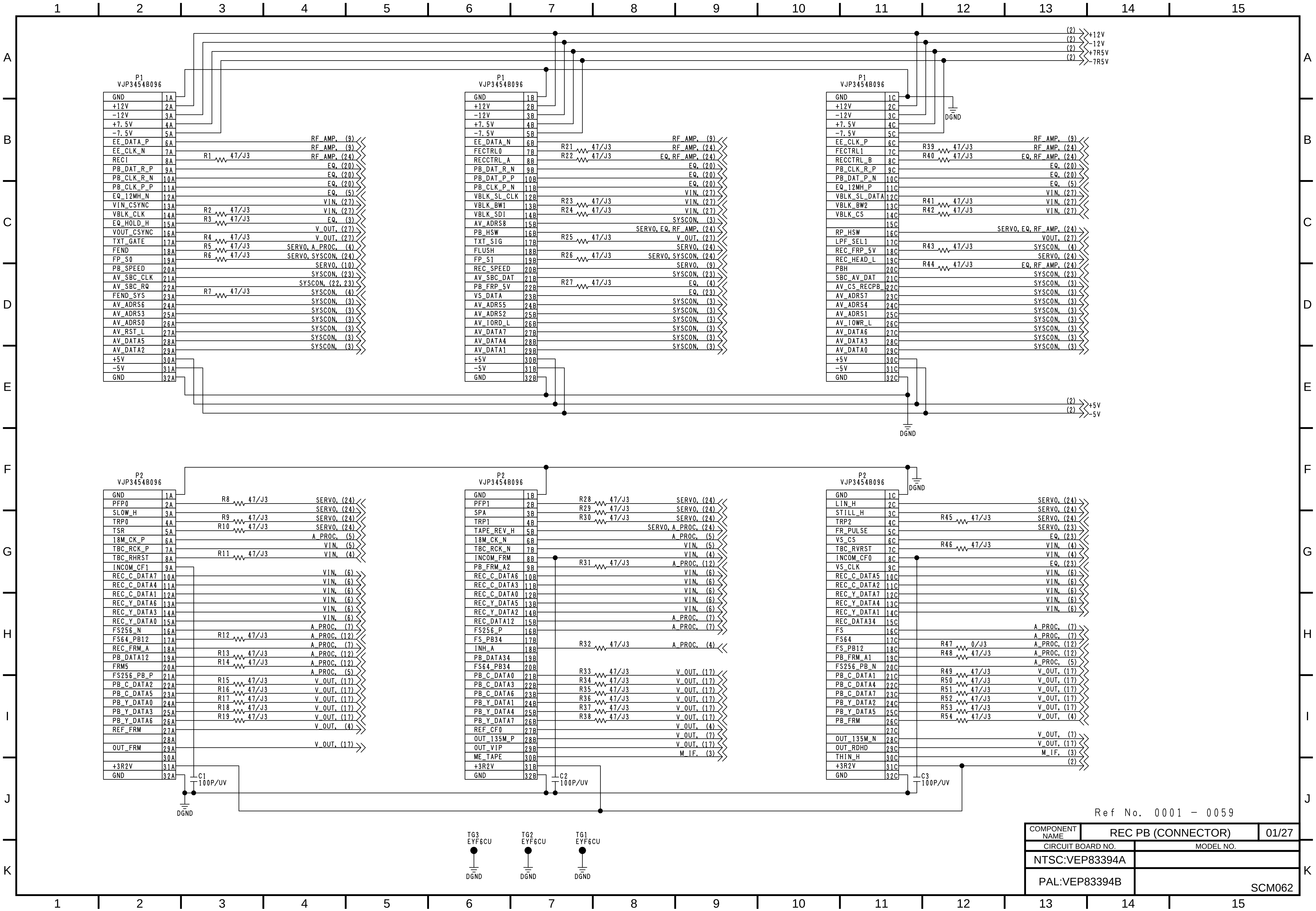

T1001
VLT0899
T1002
VLT0900
P1015
DC+
DC-
Main S Down H
AF RESET L
AF S Down H
Inrush Trigger
DC-
Q11 GATE
Q11 O.C.P
IC1 VCC
IC1 FB
Q12 GATE
Q12 O.C.P
IC2 VCC
IC2 FB
O.V.P
O.H.P
DC-
Main s Down H
AF RESET L
AF S DOWN H
DC+
Q1011
2SK2677
Q1012
2SK2677
WITH HEATSYNK
Q1014
PS2561L1V1WL
Q1015
PS2561L1V1WL
Q1020
PS2561L1V1WL
Q1013
PS2561L1V1WL
IC1011
UPC1093J
IC1012
UPC1093J
IC1013
UPC393C
IC1014
PQ30RV31
D1052
MA151K-TW
WITH HEATSYNK
(VSC4707)
Q1022
UN2113
Q1023
UN2213
Q1018
UN2211
Q1017
UN2214
Q1019
UN2111
Q1024
UN2214
D1030
D30SC4M
D1031
FMLG12SP
D1016
FMBG14L
D1032
RL4ZPLF-M1
D1033
FMLG12SP
D1034
FMLG12SP
D1036
FMLG12SP
D1035
FMBG14L
D1037
MA3075-MTX
D1038
MA3075-MTX
D1039
MA3240-LTX
D1040
MA3160-LTX
D1041
MA3130-MTX
D1042
MA3130-MTX
D1043
MA3160-LTX
D1011
MA151K-TW
WITH SECOND HEATSYNK
L1012
VLQ0479
L1013
VLQ0605
L1014
VLQ0655K220T
L1015
VLQ0605
L1016
VLQ0605
L1017
VLQ0354
L1018
VLQ0655K220T
R1055
VRT0142
VR1001
500
VR1002
500
P5V
12V
P1012
5V
5V
5V
-5V
GND
GND
GN
GND
3V
P1014
12V
FAN PULSE
GND
P1011
FAN PULSE
GND
16V
P1013
-7.5V
7.5V
-12V
12V
GND
GND
GND
GND
TO chassis

COMPONENT NAME	POWER 2	01/02
CIRCUIT BOARD NO.	MODEL NO.	
VEP81184B		
	SCM213	


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
D1012
MA3240-HTX
R1024
150K
(1/2W)
R1023
150K
(1/2W)
D1013
UIGU44
C1017
0.1
R1018
2.2
C1011
50V1
D1023
MA3051-MTX
R1046
330K
D1001
MA151WK-TW
Q1006
2SB709
D1010
UIGU44
R1020
10
(1/4W)
R1009
4.7
(1/4W)
R1007
1M
Q1002
2SD1478
IC1001
FA5311BP
CS
CT
VCC
OUT
FB
IS+
GND
8
7
6
5
1
2
3
4
D1007
MA3082-HTX
C1009
50V22
R1014
150K
R1047
330K
R1010
100K
Q1007
2SB709
C1018
0.1
R1028
4700
R1029
220
R1030
470
C1019
5600P
D1008
MA3051-MTX
C1015
3300P
R1011
240
D1009
MA153-TX
C1008
2200P
R1097
22K
D1005
MA151WK-TX
R1034
150K
(1/2W)
R1033
150K
(1/2W)
R1042
330K
C1006
0.1
R1049
47K
D1021
MA151K-TX
C1020
0.1
R1019
2.2
C1013
50V1
D1015
MA3240-HTX
C1016
470P
R1027
56K
D1017
UIGU44
R1031
10
(1/4W)
R1016
4.7
(1/4W)
Q1004
2SB710
R1026
68K
R1048
47K
D1020
MA151K-TX
D1024
MA3051-MTX
C1021
470P
D1014
UIGU44
DC-
Q11 GATE
Q11 O.C.P
IC1 VCC
IC1 FB
Q12 GATE
Q12 O.C.P
IC2 VCC
IC2 FB
O.V.P
O.H.P
DC-
MAIN S DOWN H
AF RESET L
AF S DOWN H
DC+
D1022
MA151K-TW
C1026
0.47
R1036
100K
D1018
MA3051-MTX
C1010
50V22
R1089
150K
(1/4W)
IC1002
FA5311BP
CS
CT
VCC
OUT
FB
IS+
GND
8
7
6
5
1
2
3
4
R1008
1M
Q1003
2SD1478
Q1005
UN2213
D1019
MA3051-MTX
R1017
240
C1023
0.1
C1027
0.1
C1007
0.1
D1004
MA151K-TX
R1013
100K
C1024
0.1
R1012
100K
R1037
4700
R1038
470
R1039
680
C1022
5600P
C1012
3300P

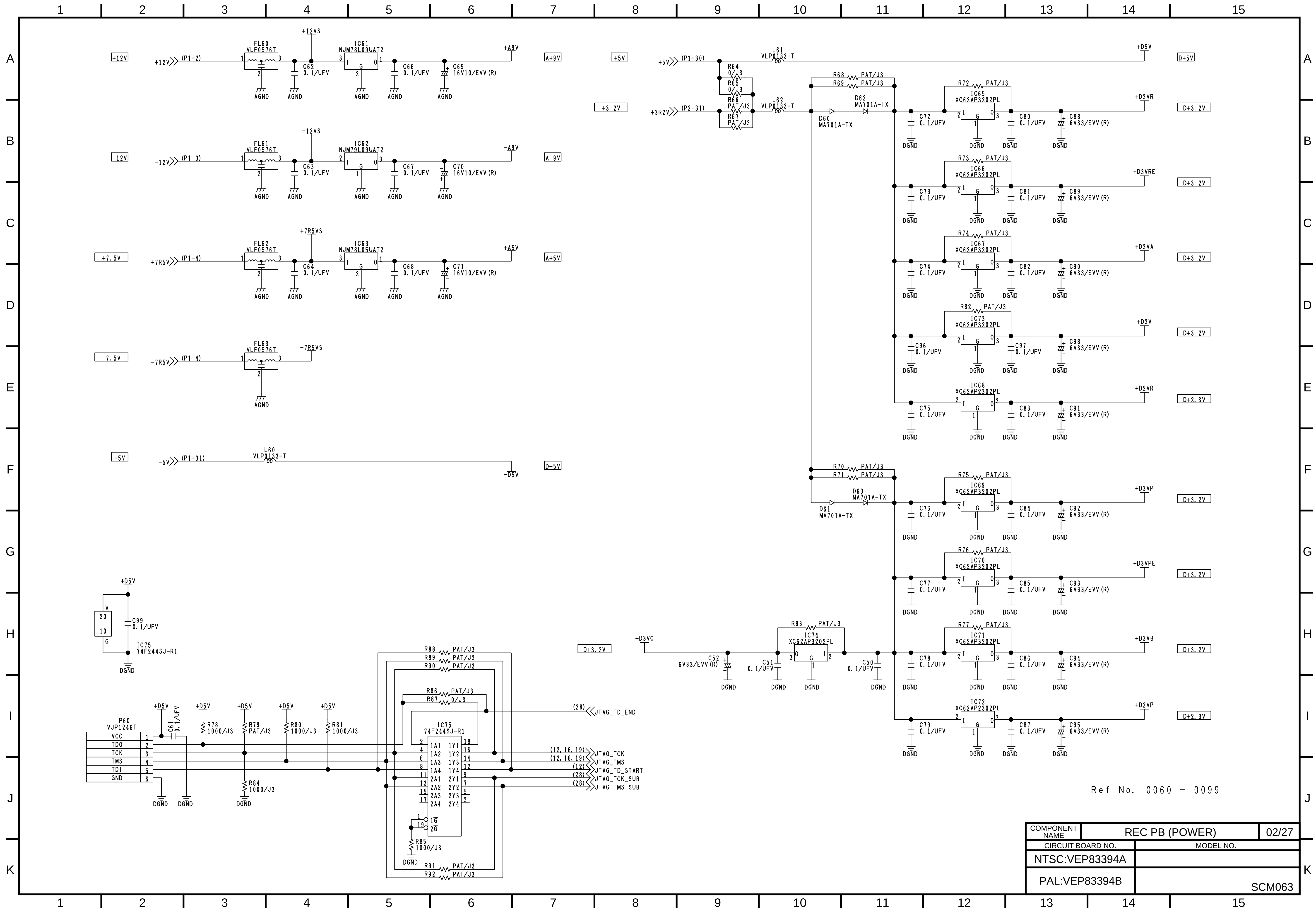
COMPONENT NAME	POWER 2		02/02
CIRCUIT BOARD NO.		MODEL NO.	
VEP81184B			
		SCM214	



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
+12V
-12V
+7R5V
-7R5V
(2)
+5V
-5V
DGND
P1
VJP3454B096
GND 1A
+12V 2A
-12V 3A
+7.5V 4A
-7.5V 5A
EE_DATA_P 6A
EE_CLK_N 7A
RECI 8A
PB_DAT_R_P 9A
PB_CLK_R_N 10A
PB_CLK_P_P 11A
EQ_12MH_N 12A
VIN_CSYNC 13A
VBLK_CLK 14A
EQ_HOLD_H 15A
VOUT_CSYNC 16A
TXT_GATE 17A
FEND 18A
FP_S0 19A
PB_SPEED 20A
AV_SBC_CLK 21A
AV_SBC_RQ 22A
FEND_SYS 23A
AV_ADRS6 24A
AV_ADRS3 25A
AV_ADRS0 26A
AV_RST_L 27A
AV_DATA5 28A
AV_DATA2 29A
+5V 30A
-5V 31A
GND 32A
R1 47/J3
R2 47/J3
R3 47/J3
R4 47/J3
R5 47/J3
R6 47/J3
R7 47/J3
RF_AMP, (9)
RF_AMP, (9)
RF_AMP, (24)
EQ, (20)
EQ, (20)
EQ, (20)
EQ, (5)
VIN, (27)
VIN, (27)
EQ, (3)
V_OUT, (27)
V_OUT, (27)
SERVO, A_PROC, (4)
SERVO, SYSCON, (24)
SERVO, (10)
SERVO, (23)
SYSCON, (22, 23)
SYSCON, (4)
SYSCON, (3)
P1
VJP3454B096
GND 1B
+12V 2B
-12V 3B
+7.5V 4B
-7.5V 5B
EE_DATA_N 6B
FECTRL0 7B
RECCTRL_A 8B
PB_DAT_R_N 9B
PB_DAT_P_P 10B
PB_CLK_P_N 11B
VBLK_SL_CLK 12B
VBLK_BW1 13B
VBLK_SDI 14B
AV_ADRS8 15B
PB_HSW 16B
TXT_SIG 17B
FLUSH 18B
FP_S1 19B
REC_SPEED 20B
AV_SBC_DAT 21B
PB_FRP_5V 22B
VS_DATA 23B
AV_ADRS5 24B
AV_ADRS2 25B
AV_IORD_L 26B
AV_DATA7 27B
AV_DATA4 28B
AV_DATA1 29B
+5V 30B
-5V 31B
GND 32B
R21 47/J3
R22 47/J3
R23 47/J3
R24 47/J3
R25 47/J3
R26 47/J3
R27 47/J3
RF_AMP, (9)
RF_AMP, (24)
EQ, RF_AMP, (24)
EQ, (20)
VIN, (27)
SYSCON, (3)
SERVO, EQ, RF_AMP, (24)
V_OUT, (27)
SERVO, (24)
SERVO, SYSCON, (24)
SERVO, (9)
SYSCON, (23)
EQ, (4)
EQ, (23)
P1
VJP3454B096
GND 1C
+12V 2C
-12V 3C
+7.5V 4C
-7.5V 5C
EE_CLK_P 6C
FECTRL1 7C
RECCTRL_B 8C
PB_CLK_R_P 9C
PB_DAT_P_N 10C
EQ_12MH_P 11C
VBLK_SL_DATA 12C
VBLK_BW2 13C
VBLK_CS 14C
15C
RP_HSW 16C
LPF_SEL1 17C
REC_FRP_5V 18C
REC_HEAD_L 19C
PBH 20C
SBC_AV_DAT 21C
AV_CS_RECPB_ 22C
AV_ADRS7 23C
AV_ADRS4 24C
AV_ADRS1 25C
AV_IOWR_L 26C
AV_DATA6 27C
AV_DATA3 28C
AV_DATA0 29C
+5V 30C
-5V 31C
GND 32C
R39 47/J3
R40 47/J3
R41 47/J3
R42 47/J3
R43 47/J3
R44 47/J3
VOUT, (27)
SYSCON, (4)
EQ, RF_AMP, (24)
P2
VJP3454B096
GND 1A
PFP0 2A
SLOW_H 3A
TRP0 4A
TSR 5A
18M_CK_P 6A
TBC_RCK_P 7A
TBC_RHRST 8A
INCOM_CF1 9A
REC_C_DATA7 10A
REC_C_DATA4 11A
REC_C_DATA1 12A
REC_Y_DATA6 13A
REC_Y_DATA3 14A
REC_Y_DATA0 15A
FS256_N 16A
FS64_PB12 17A
REC_FRM_A 18A
PB_DATA12 19A
FRM5 20A
FS256_PB_P 21A
PB_C_DATA2 22A
PB_C_DATA5 23A
PB_Y_DATA0 24A
PB_Y_DATA3 25A
PB_Y_DATA6 26A
REF_FRM 27A
28A
OUT_FRM 29A
30A
+3R2V 31A
GND 32A
R8 47/J3
R9 47/J3
R10 47/J3
R11 47/J3
R12 47/J3
R13 47/J3
R14 47/J3
R15 47/J3
R16 47/J3
R17 47/J3
R18 47/J3
R19 47/J3
C1 100P/UV
SERVO, (24)
A_PROC, (5)
VIN, (5)
VIN, (4)
VIN, (6)
A_PROC, (7)
A_PROC, (12)
V_OUT, (17)
V_OUT, (4)
P2
VJP3454B096
GND 1B
PFP1 2B
SPA 3B
TRP1 4B
TAPE_REV_H 5B
18M_CK_N 6B
TBC_RCK_N 7B
INCOM_FRM 8B
PB_FRM_A2 9B
REC_C_DATA6 10B
REC_C_DATA3 11B
REC_C_DATA0 12B
REC_Y_DATA5 13B
REC_Y_DATA2 14B
REC_DATA12 15B
FS256_P 16B
FS_PB34 17B
INH_A 18B
PB_DATA34 19B
FS64_PB34 20B
PB_C_DATA0 21B
PB_C_DATA3 22B
PB_C_DATA6 23B
PB_Y_DATA1 24B
PB_Y_DATA4 25B
PB_Y_DATA7 26B
REF_CF0 27B
OUT_135M_P 28B
OUT_VIP 29B
ME_TAPE 30B
+3R2V 31B
GND 32B
R28 47/J3
R29 47/J3
R30 47/J3
R31 47/J3
R32 47/J3
R33 47/J3
R34 47/J3
R35 47/J3
R36 47/J3
R37 47/J3
R38 47/J3
C2 100P/UV
SERVO, A_PROC, (24)
A_PROC, (4)
V_OUT, (7)
M_IF, (3)
P2
VJP3454B096
GND 1C
LIN_H 2C
STILL_H 3C
TRP2 4C
FR_PULSE 5C
VS_CS 6C
TBC_RVRST 7C
INCOM_CF0 8C
VS_CLK 9C
REC_C_DATA5 10C
REC_C_DATA2 11C
REC_Y_DATA7 12C
REC_Y_DATA4 13C
REC_Y_DATA1 14C
REC_DATA34 15C
FS 16C
FS64 17C
FS_PB12 18C
PB_FRM_A1 19C
FS256_PB_N 20C
PB_C_DATA1 21C
PB_C_DATA4 22C
PB_C_DATA7 23C
PB_Y_DATA2 24C
PB_Y_DATA5 25C
PB_FRM 26C
27C
OUT_135M_N 28C
OUT_RDHD 29C
THIN_H 30C
+3R2V 31C
GND 32C
R45 47/J3
R46 47/J3
R47 0/J3
R48 47/J3
R49 47/J3
R50 47/J3
R51 47/J3
R52 47/J3
R53 47/J3
R54 47/J3
C3 100P/UV
SERVO, (23)
EQ, (23)
TG3 EYF6CU
TG2 EYF6CU
TG1 EYF6CU

Ref No. 0001 - 0059

COMPONENT NAME	REC PB (CONNECTOR)	01/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM062	

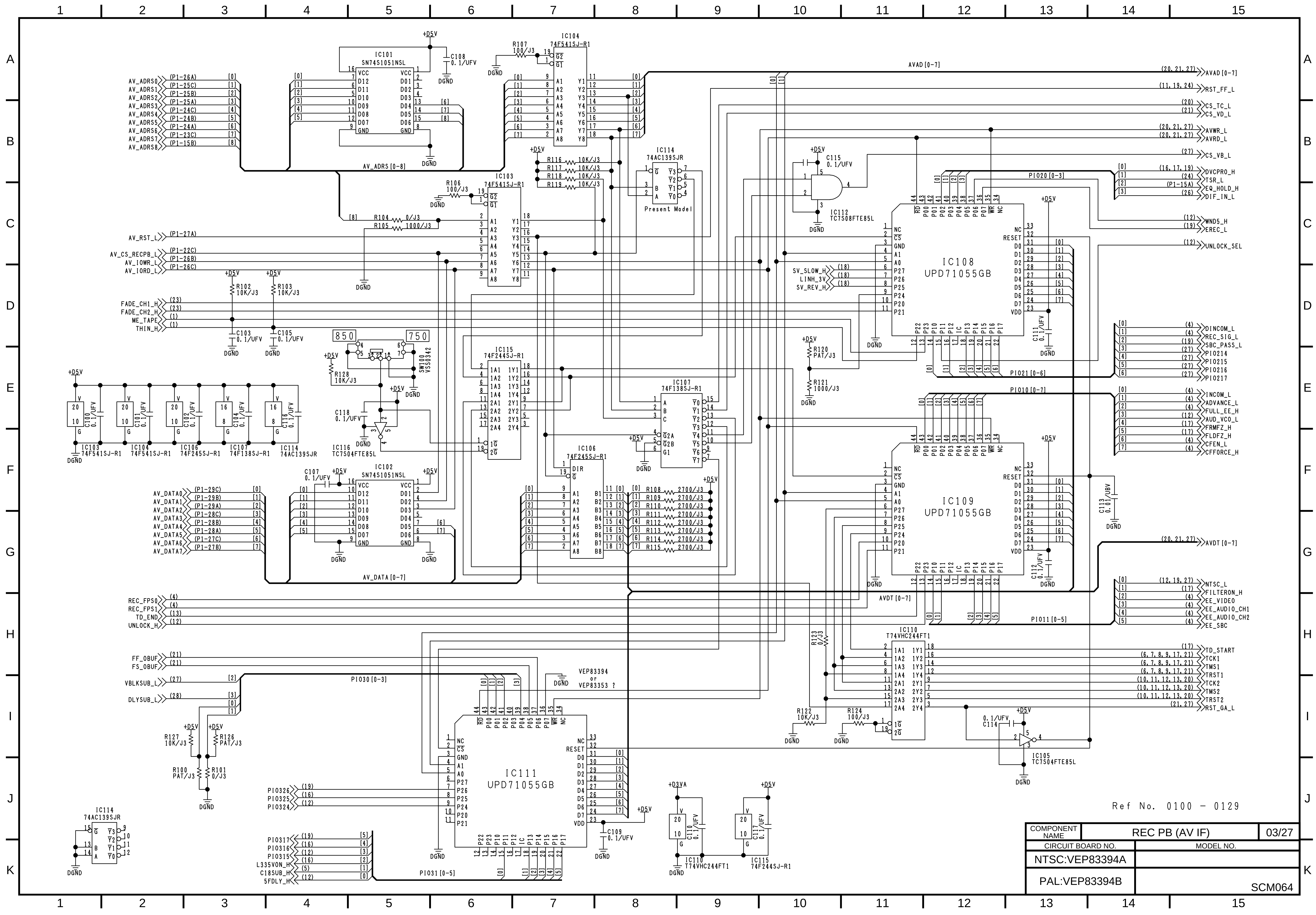


+12V
+12V (P1-2)
FL60 VLF0576T
C62 0.1/UFV
+12VS
IC61 NJM78L09UAT2
C66 0.1/UFV
C69 16V10/EVV(R)
+A9V
A+9V
AGND
-12V
-12V (P1-3)
FL61 VLF0576T
C63 0.1/UFV
-12VS
IC62 NJM79L09UAT2
C67 0.1/UFV
C70 16V10/EVV(R)
-A9V
A-9V
+7.5V
+7R5V (P1-4)
FL62 VLF0576T
C64 0.1/UFV
+7R5VS
IC63 NJM78L05UAT2
C68 0.1/UFV
C71 16V10/EVV(R)
+A5V
A+5V
-7.5V
-7R5V (P1-4)
FL63 VLF0576T
-7R5VS
-5V
-5V (P1-31)
L60 VLP0133-T
-D5V
D-5V
+5V
+5V (P1-30)
L61 VLP0133-T
+D5V
D+5V
+3.2V
+3R2V (P2-31)
R64 0/J3
R65 0/J3
R66 PAT/J3
R67 PAT/J3
L62 VLP0133-T
D60 MA701A-TX
D62 MA701A-TX
R68 PAT/J3
R69 PAT/J3
R72 PAT/J3
IC65 XC62AP3202PL
C72 0.1/UFV
C80 0.1/UFV
C88 6V33/EVV(R)
+D3VR
D+3.2V
R73 PAT/J3
IC66 XC62AP3202PL
C73 0.1/UFV
C81 0.1/UFV
C89 6V33/EVV(R)
+D3VRE
R74 PAT/J3
IC67 XC62AP3202PL
C74 0.1/UFV
C82 0.1/UFV
C90 6V33/EVV(R)
+D3VA
R82 PAT/J3
IC73 XC62AP3202PL
C96 0.1/UFV
C97 0.1/UFV
C98 6V33/EVV(R)
+D3V
IC68 XC62AP2302PL
C75 0.1/UFV
C83 0.1/UFV
C91 6V33/EVV(R)
+D2VR
D+2.3V
R70 PAT/J3
R71 PAT/J3
D63 MA701A-TX
D61 MA701A-TX
R75 PAT/J3
IC69 XC62AP3202PL
C76 0.1/UFV
C84 0.1/UFV
C92 6V33/EVV(R)
+D3VP
R76 PAT/J3
IC70 XC62AP3202PL
C77 0.1/UFV
C85 0.1/UFV
C93 6V33/EVV(R)
+D3VPE
+D3VC
D+3.2V
C52 6V33/EVV(R)
C51 0.1/UFV
R83 PAT/J3
IC74 XC62AP3202PL
C50 0.1/UFV
R77 PAT/J3
IC71 XC62AP3202PL
C78 0.1/UFV
C86 0.1/UFV
C94 6V33/EVV(R)
+D3VB
IC72 XC62AP2302PL
C79 0.1/UFV
C87 0.1/UFV
C95 6V33/EVV(R)
+D2VP
D+2.3V
DGND
+D5V
C99 0.1/UFV
IC75 74F244SJ-R1
P60 VJP1246T
VCC
TDO
TCK
TMS
TDI
GND
C61 0.1/UFV
R78 1000/J3
R79 PAT/J3
R80 1000/J3
R81 1000/J3
R84 1000/J3
R88 PAT/J3
R89 PAT/J3
R90 PAT/J3
R86 PAT/J3
R87 0/J3
IC75 74F244SJ-R1
1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4
1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4
1G 2G
R85 1000/J3
R91 PAT/J3
R92 PAT/J3
(28) JTAG_TD_END
(12,16,19) JTAG_TCK
(12,16,19) JTAG_TMS
(12) JTAG_TD_START
(28) JTAG_TCK_SUB
(28) JTAG_TMS_SUB

Ref No. 0060 - 0099

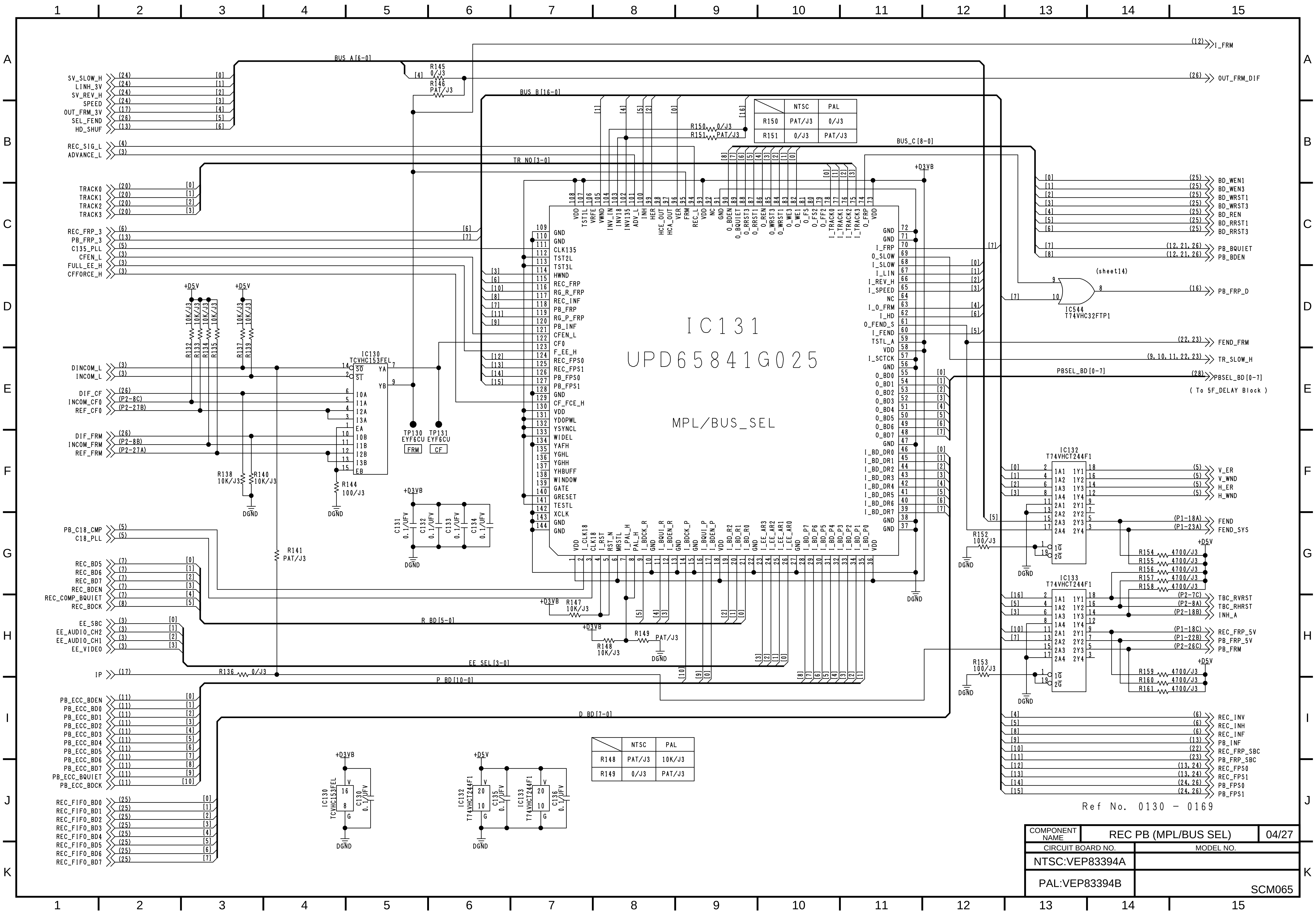
COMPONENT NAME	REC PB (POWER)	02/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B		

SCM063


IC101 SN74S1051NSL
IC102 SN74S1051NSL
IC103 74F541SJ-R1
IC104 74F541SJ-R1
IC105 TC7S04FTE85L
IC106 74F245SJ-R1
IC107 74F138SJ-R1
IC108 UPD71055GB
IC109 UPD71055GB
IC110 T74VHC244FT1
IC111 UPD71055GB
IC112 TC7S08FTE85L
IC114 74AC139SJR
IC115 74F244SJ-R1
IC116 TC7S04FTE85L
Present Model
SW100 VSS0342
850
750
VEP83394 or VEP83353 ?
AV_ADRS0
AV_ADRS1
AV_ADRS2
AV_ADRS3
AV_ADRS4
AV_ADRS5
AV_ADRS6
AV_ADRS7
AV_ADRS8
AV_ADRS [0-8]
AV_RST_L
AV_CS_RECPB_L
AV_IOWR_L
AV_IORD_L
FADE_CH1_H
FADE_CH2_H
ME_TAPE
THIN_H
AV_DATA0
AV_DATA1
AV_DATA2
AV_DATA3
AV_DATA4
AV_DATA5
AV_DATA6
AV_DATA7
AV_DATA [0-7]
REC_FPS0
REC_FPS1
TD_END
UNLOCK_H
FF_OBUF
FS_OBUF
VBLKSUB_L
DLYSUB_L
PIO30 [0-3]
PIO326
PIO325
PIO324
PIO317
PIO316
PIO315
L335VON_H
C18SUB_H
5FDLY_H
PIO31 [0-5]
AVAD [0-7]
AVDT [0-7]
PIO20 [0-3]
PIO21 [0-6]
PIO10 [0-7]
PIO11 [0-5]
SV_SLOW_H
LINH_3V
SV_REV_H
AVAD [0-7]
RST_FF_L
CS_TC_L
CS_VD_L
AVWR_L
AVRD_L
CS_VB_L
DVCPRO_H
TSR_L
EQ_HOLD_H
DIF_IN_L
WND5_H
EREC_L
UNLOCK_SEL
DINCOM_L
REC_SIG_L
SBC_PASS_L
PIO214
PIO215
PIO216
PIO217
INCOM_L
ADVANCE_L
FULL_EE_H
AUD_VCO_L
FRMFZ_H
FLDFZ_H
CFEN_L
CFFORCE_H
AVDT [0-7]
NTSC_L
FILTERON_H
EE_VIDEO
EE_AUDIO_CH1
EE_AUDIO_CH2
EE_SBC
TD_START
TCK1
TMS1
TRST1
TCK2
TMS2
TRST2
RST_GA_L
+D5V
+D3VA
DGND
R101 0/J3
R100 PAT/J3
R102 10K/J3
R103 10K/J3
R104 0/J3
R105 1000/J3
R106 100/J3
R107 100/J3
R108–R115 2700/J3
R116–R119 10K/J3
R120 PAT/J3
R121 1000/J3
R122 10K/J3
R123 0/J3
R124 100/J3
R126 PAT/J3
R127 10K/J3
R128 10K/J3
C100–C112, C114–C118 0.1/UFV
C113 0.01/UBV

Ref No. 0100 - 0129

COMPONENT NAME	REC PB (AV IF)	03/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM064	

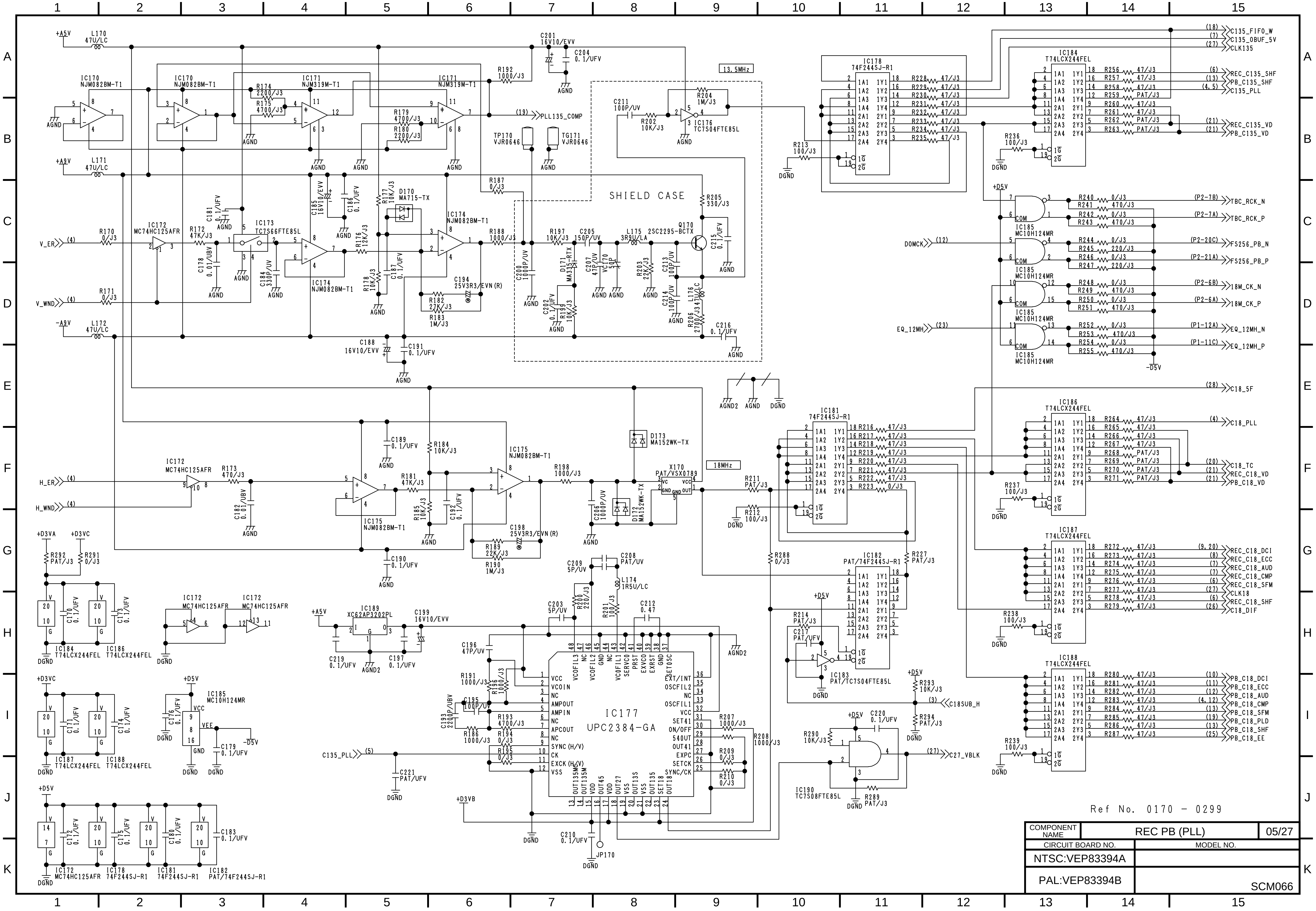

IC131
UPD65841G025
MPL/BUS_SEL
IC130 TCVHC153FEL
IC132 T74VHCT244F1
IC133 T74VHCT244F1
IC544 T74VHC32FTP1
(sheet14)
BUS_A[6-0]
BUS_B[16-0]
BUS_C[8-0]
TR_NO[3-0]
R_BD[5-0]
EE_SEL[3-0]
P_BD[10-0]
D_BD[7-0]
PBSEL_BD[0-7]
SV_SLOW_H
LINH_3V
SV_REV_H
SPEED
OUT_FRM_3V
SEL_FEND
HD_SHUF
REC_SIG_L
ADVANCE_L
TRACK0
TRACK1
TRACK2
TRACK3
REC_FRP_3
PB_FRP_3
C135_PLL
CFEN_L
FULL_EE_H
CFFORCE_H
DINCOM_L
INCOM_L
DIF_CF
INCOM_CF0
REF_CF0
DIF_FRM
INCOM_FRM
REF_FRM
PB_C18_CMP
C18_PLL
REC_BD5
REC_BD6
REC_BD7
REC_BDEN
REC_COMP_BQUIET
REC_BDCK
EE_SBC
EE_AUDIO_CH2
EE_AUDIO_CH1
EE_VIDEO
IP
PB_ECC_BDEN
PB_ECC_BD0
PB_ECC_BD1
PB_ECC_BD2
PB_ECC_BD3
PB_ECC_BD4
PB_ECC_BD5
PB_ECC_BD6
PB_ECC_BD7
PB_ECC_BQUIET
PB_ECC_BDCK
REC_FIFO_BD0
REC_FIFO_BD1
REC_FIFO_BD2
REC_FIFO_BD3
REC_FIFO_BD4
REC_FIFO_BD5
REC_FIFO_BD6
REC_FIFO_BD7
I_FRM
OUT_FRM_DIF
BD_WEN1
BD_WEN3
BD_WRST1
BD_WRST3
BD_REN
BD_RRST1
BD_RRST3
PB_BQUIET
PB_BDEN
PB_FRP_D
FEND_FRM
TR_SLOW_H
PBSEL_BD[0-7]
(To 5F_DELAY Block)
V_ER
V_WND
H_ER
H_WND
FEND
FEND_SYS
TBC_RVRST
TBC_RHRST
INH_A
REC_FRP_5V
PB_FRP_5V
PB_FRM
REC_INV
REC_INH
REC_INF
PB_INF
REC_FRP_SBC
PB_FRP_SBC
REC_FPS0
REC_FPS1
PB_FPS0
PB_FPS1
R145 0/J3
R146 PAT/J3
R150 0/J3
R151 PAT/J3
R132 10K/J3
R133 10K/J3
R134 10K/J3
R135 10K/J3
R137 10K/J3
R139 10K/J3
R138 10K/J3
R140 10K/J3
R144 100/J3
R141 PAT/J3
R136 0/J3
R147 10K/J3
R148 10K/J3
R149 PAT/J3
R152 100/J3
R153 100/J3
R154 4700/J3
R155 4700/J3
R156 4700/J3
R157 4700/J3
R158 4700/J3
R159 4700/J3
R160 4700/J3
R161 4700/J3
TP130 EYF6CU FRM
TP131 EYF6CU CF
C131 0.1/UFV
C132 0.1/UFV
C133 0.1/UFV
C134 0.1/UFV
C130 0.1/UFV
C135 0.1/UFV
C136 0.1/UFV
+D5V
+D3VB
DGND

	NTSC	PAL
R150	PAT/J3	0/J3
R151	0/J3	PAT/J3

	NTSC	PAL
R148	PAT/J3	10K/J3
R149	0/J3	PAT/J3

Ref No. 0130 - 0169

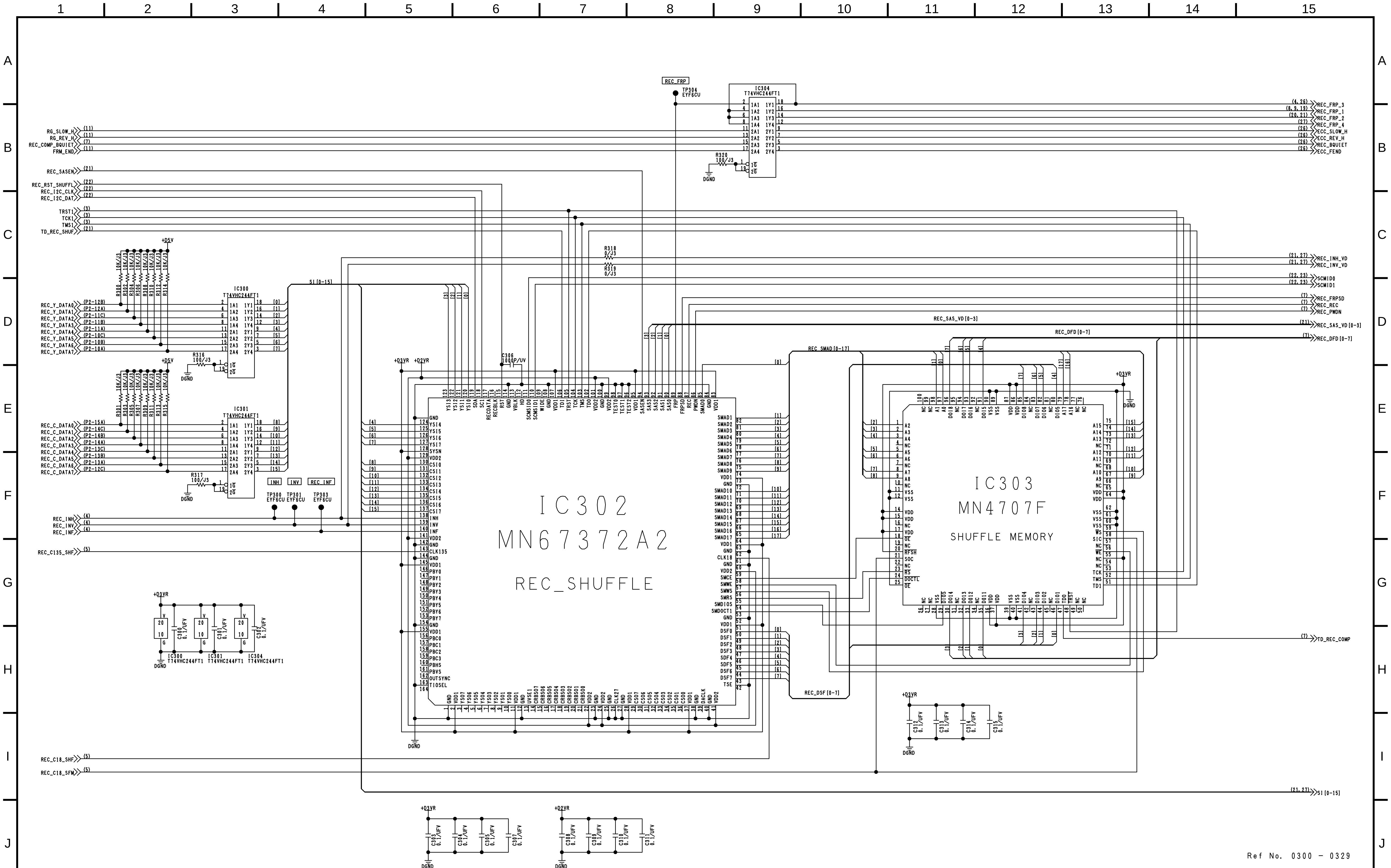
COMPONENT NAME	REC PB (MPL/BUS SEL)	04/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM065	



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K
+A5V
L170 47U/LC
+A9V
L171 47U/LC
-A9V
L172 47U/LC
IC170 NJM082BM-T1
IC171 NJM319M-T1
IC172 MC74HC125AFR
IC173 TC7S66FTE85L
IC174 NJM082BM-T1
IC175 NJM082BM-T1
IC176 TC7S04FTE85L
IC177 UPC2384-GA
IC178 74F244SJ-R1
IC181 74F244SJ-R1
IC182 PAT/74F244SJ-R1
IC183 PAT/TC7S04FTE85L
IC184 T74LCX244FEL
IC185 MC10H124MR
IC186 T74LCX244FEL
IC187 T74LCX244FEL
IC188 T74LCX244FEL
IC189 XC62AP3202PL
IC190 TC7S08FTE85L
Q170 2SC2295-BCTX
D170 MA715-TX
D171 MA335-RTX
D172 MA152WK-TX
D173 MA152WK-TX
X170 PAT/VSX0789
TP170 VJR0646
TG171 VJR0646
SHIELD CASE
13.5MHz
18MHz
V_ER (4)
V_WND (4)
H_ER (4)
H_WND (4)
(19) PLL135_COMP
DOMCK (12)
EQ_12MH (23)
C135_PLL (5)
(3) C18SUB_H
(27) C27_VBLK
(18) C135_FIFO_W
(7) C135_OBUF_5V
(27) CLK135
(6) REC_C135_SHF
(13) PB_C135_SHF
(4, 5) C135_PLL
(21) REC_C135_VD
(21) PB_C135_VD
(P2-7B) TBC_RCK_N
(P2-7A) TBC_RCK_P
(P2-20C) FS256_PB_N
(P2-21A) FS256_PB_P
(P2-6B) 18M_CK_N
(P2-6A) 18M_CK_P
(P1-12A) EQ_12MH_N
(P1-11C) EQ_12MH_P
(28) C18_5F
(4) C18_PLL
(20) C18_TC
(21) REC_C18_VD
(21) PB_C18_VD
(9, 20) REC_C18_DCI
(8) REC_C18_ECC
(7) REC_C18_AUD
(7) REC_C18_CMP
(6) REC_C18_SFM
(27) CLK18
(6) REC_C18_SHF
(26) C18_DIF
(10) PB_C18_DCI
(11) PB_C18_ECC
(12) PB_C18_AUD
(4, 12) PB_C18_CMP
(13) PB_C18_SFM
(19) PB_C18_PLD
(13) PB_C18_SHF
(25) PB_C18_EE
+D5V
-D5V
+D3VA
+D3VC
+D3VB
AGND
AGND2
DGND
JP170

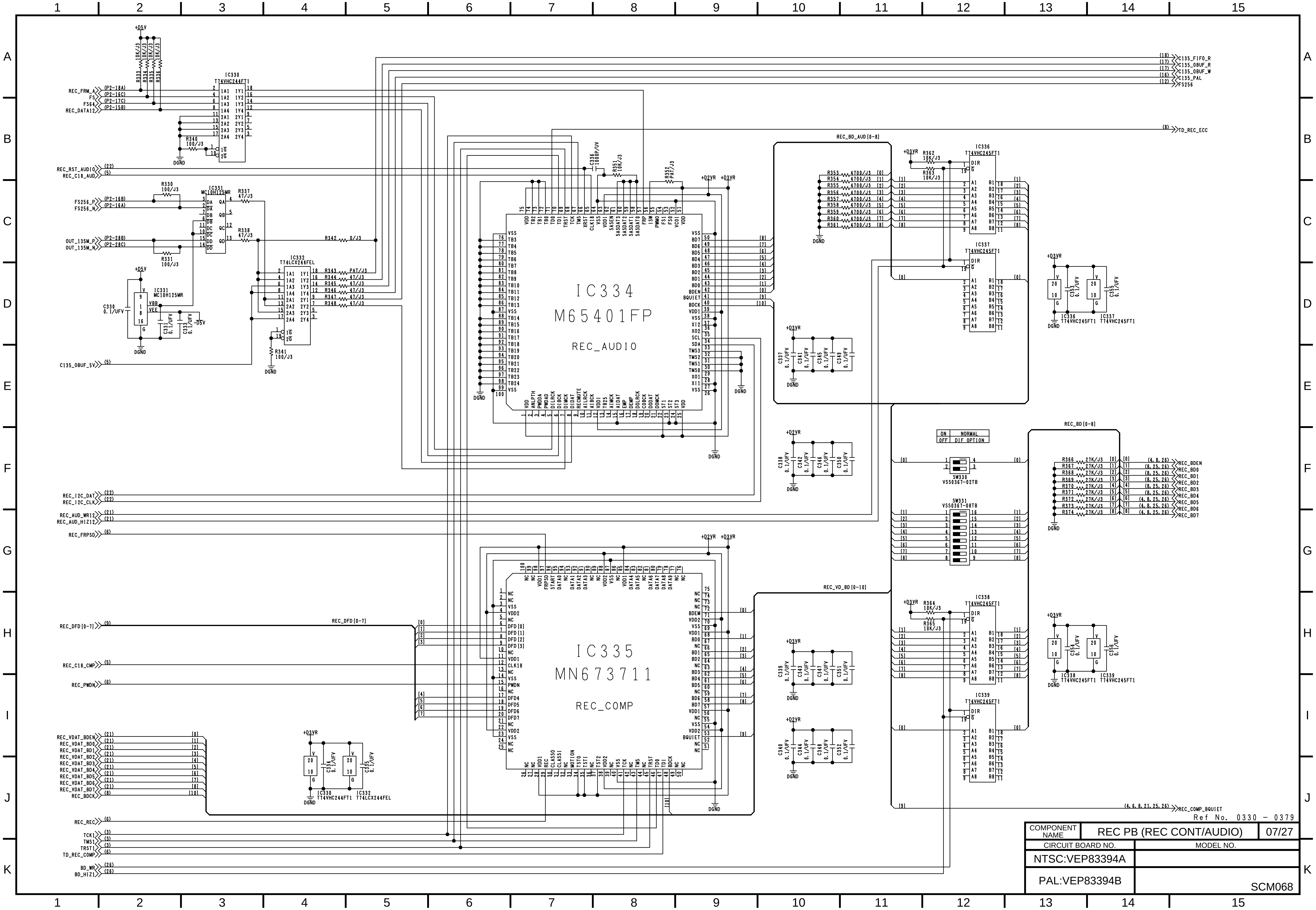
Ref No. 0170 - 0299

COMPONENT NAME	REC PB (PLL)	05/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B		SCM066


IC302
MN67372A2
REC_SHUFFLE
IC303
MN4707F
SHUFFLE MEMORY
IC304
T74VHC244FT1
IC300
T74VHC244FT1
IC301
T74VHC244FT1
REC_FRP
TP304
EYF6CU
R320
100/J3
DGND
RG_SLOW_H
RG_REV_H
REC_COMP_BQUIET
FRM_END
REC_SASEN
REC_RST_SHUFFL
REC_I2C_CLK
REC_I2C_DAT
TRST
TCK
TMS
TD_REC_SHUF
+D5V
R318
0/J3
R319
0/J3
SI[0-15]
REC_Y_DATA0
REC_Y_DATA1
REC_Y_DATA2
REC_Y_DATA3
REC_Y_DATA4
REC_Y_DATA5
REC_Y_DATA6
REC_Y_DATA7
R316
100/J3
REC_C_DATA0
REC_C_DATA1
REC_C_DATA2
REC_C_DATA3
REC_C_DATA4
REC_C_DATA5
REC_C_DATA6
REC_C_DATA7
R317
100/J3
INH
INV
REC_INF
TP300
EYF6CU
TP301
EYF6CU
TP303
EYF6CU
REC_INH
REC_INV
REC_INF
REC_C135_SHF
+D3VR
+D2VR
C306
1000P/UV
REC_SMAD[0-17]
REC_SAS_VD[0-3]
REC_DFD[0-7]
REC_DSF[0-7]
REC_FRP_3
REC_FRP_1
REC_FRP_2
REC_FRP_4
ECC_SLOW_H
ECC_REV_H
REC_BQUIET
ECC_FEND
REC_INH_VD
REC_INV_VD
SCMID0
SCMID1
REC_FRPSD
REC_REC
REC_PWDN
REC_SAS_VD[0-3]
REC_DFD[0-7]
TD_REC_COMP
REC_C18_SHF
REC_C18_SFM
SI[0-15]
C300
0.1/UFV
C301
0.1/UFV
C302
0.1/UFV
T74VHC244FT1
C303
C304
C305
C307
C308
C309
C310
C311
C312
C313
C314
C315
0.1/UFV
DGND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K

Ref No. 0300 - 0329

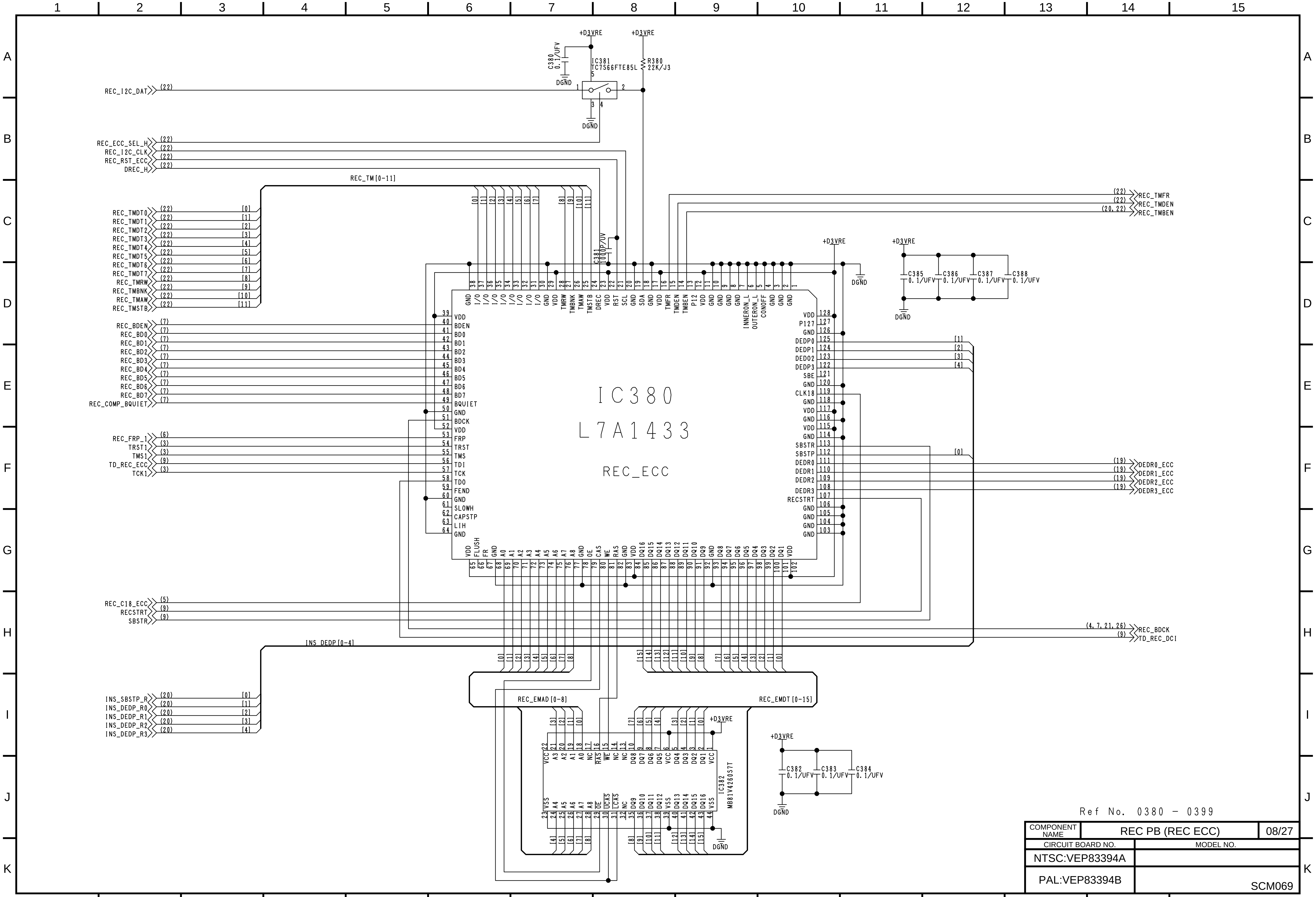
COMPONENT NAME	REC PB (REC SHUFFLE)	06/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B		SCM067



IC334
M65401FP
REC_AUDIO
IC335
MN673711
REC_COMP
IC330 TC74VHC244FT1
IC331 MC10H125MR
IC332 TC74LCX244FEL
IC336 TC74VHC245FT1
IC337 TC74VHC245FT1
IC338 TC74VHC245FT1
IC339 TC74VHC245FT1
SW330 VSS0367-02TB
SW331 VSS0367-08TB
ON NORMAL
OFF DIF OPTION
REC_FRM_A
FS
FS64
REC_DATA12
REC_RST_AUDIO
REC_C18_AUDIO
FS256_P
FS256_N
OUT_135M_P
OUT_135M_N
C135_OBUF_5V
REC_I2C_DAT
REC_I2C_CLK
REC_AUD_WR12
REC_AUD_HIZ12
REC_FRPSD
REC_DFD[0-7]
REC_C18_CMP
REC_PWDN
REC_VDAT_BDEN
REC_VDAT_BD0
REC_VDAT_BD1
REC_VDAT_BD2
REC_VDAT_BD3
REC_VDAT_BD4
REC_VDAT_BD5
REC_VDAT_BD6
REC_VDAT_BD7
REC_BDCK
REC_REC
TCK1
TMS1
TRST1
TD_REC_COMP
BD_WR
BD_HIZ1
C135_FIFO_R
C135_OBUF_R
C135_OBUF_W
C135_PAL
FS256
TD_REC_ECC
REC_BD_AUD[0-8]
REC_BD[0-8]
REC_VD_BD[0-10]
REC_BDEN
REC_BD0
REC_BD1
REC_BD2
REC_BD3
REC_BD4
REC_BD5
REC_BD6
REC_BD7
REC_COMP_BQUIET
+D5V
+D3VR
+D2VR
-D5V
DGND
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

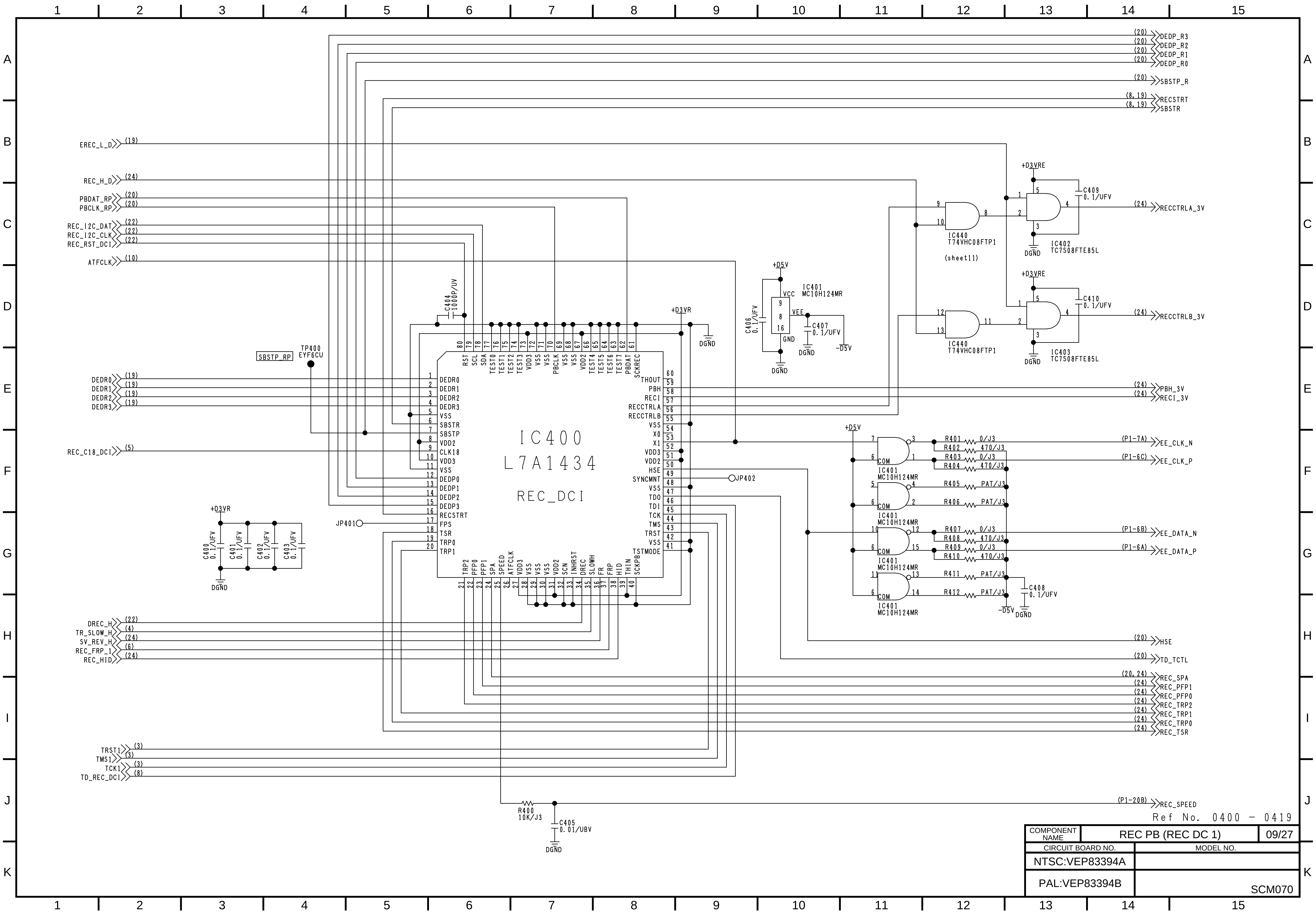
Ref No. 0330 - 0379

COMPONENT NAME	REC PB (REC CONT/AUDIO)	07/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM068	

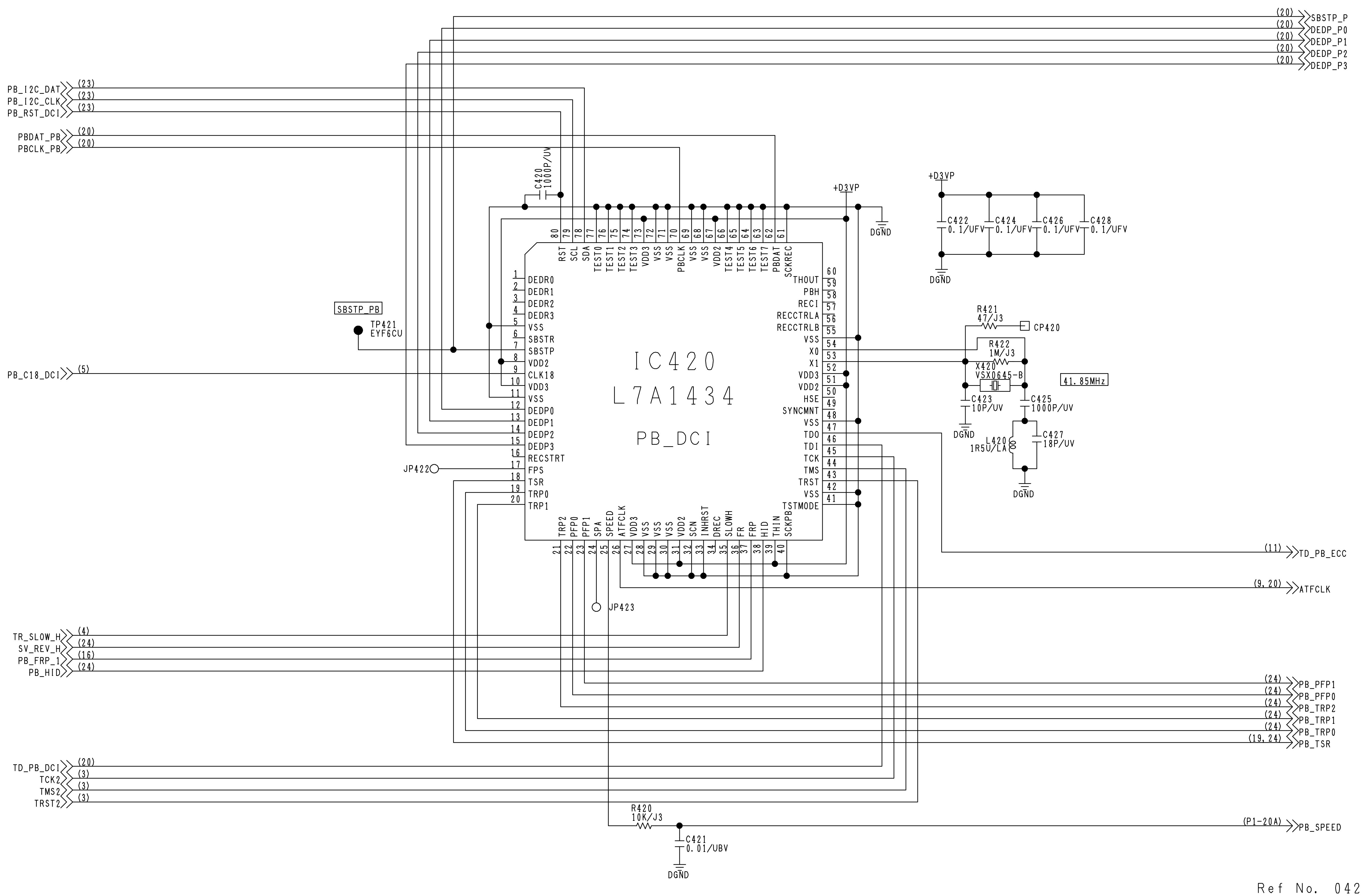

IC380
L7A1433
REC_ECC
IC381
TC7S66FTE85L
IC382
MB81V426057T
R380
22K/J3
C380
0.1/UFV
C381
1000P/UV
C382
0.1/UFV
C383
0.1/UFV
C384
0.1/UFV
C385
0.1/UFV
C386
0.1/UFV
C387
0.1/UFV
C388
0.1/UFV
+D3VRE
DGND
REC_I2C_DAT
REC_ECC_SEL_H
REC_I2C_CLK
REC_RST_ECC
DREC_H
REC_TM[0-11]
REC_TMDT0
REC_TMDT1
REC_TMDT2
REC_TMDT3
REC_TMDT4
REC_TMDT5
REC_TMDT6
REC_TMDT7
REC_TMRW
REC_TMBNK
REC_TMAW
REC_TMSTB
REC_BDEN
REC_BD0
REC_BD1
REC_BD2
REC_BD3
REC_BD4
REC_BD5
REC_BD6
REC_BD7
REC_COMP_BQUIET
REC_FRP_1
TRST1
TMS1
TD_REC_ECC
TCK1
REC_C18_ECC
RECSTRT
SBSTR
INS_DEDP[0-4]
INS_SBSTP_R
INS_DEDP_R0
INS_DEDP_R1
INS_DEDP_R2
INS_DEDP_R3
REC_TMFR
REC_TMDEN
REC_TMBEN
DEDR0_ECC
DEDR1_ECC
DEDR2_ECC
DEDR3_ECC
REC_BDCK
TD_REC_DCI
REC_EMAD[0-8]
REC_EMDT[0-15]

Ref No. 0380 - 0399

COMPONENT NAME	REC PB (REC ECC)	08/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM069	

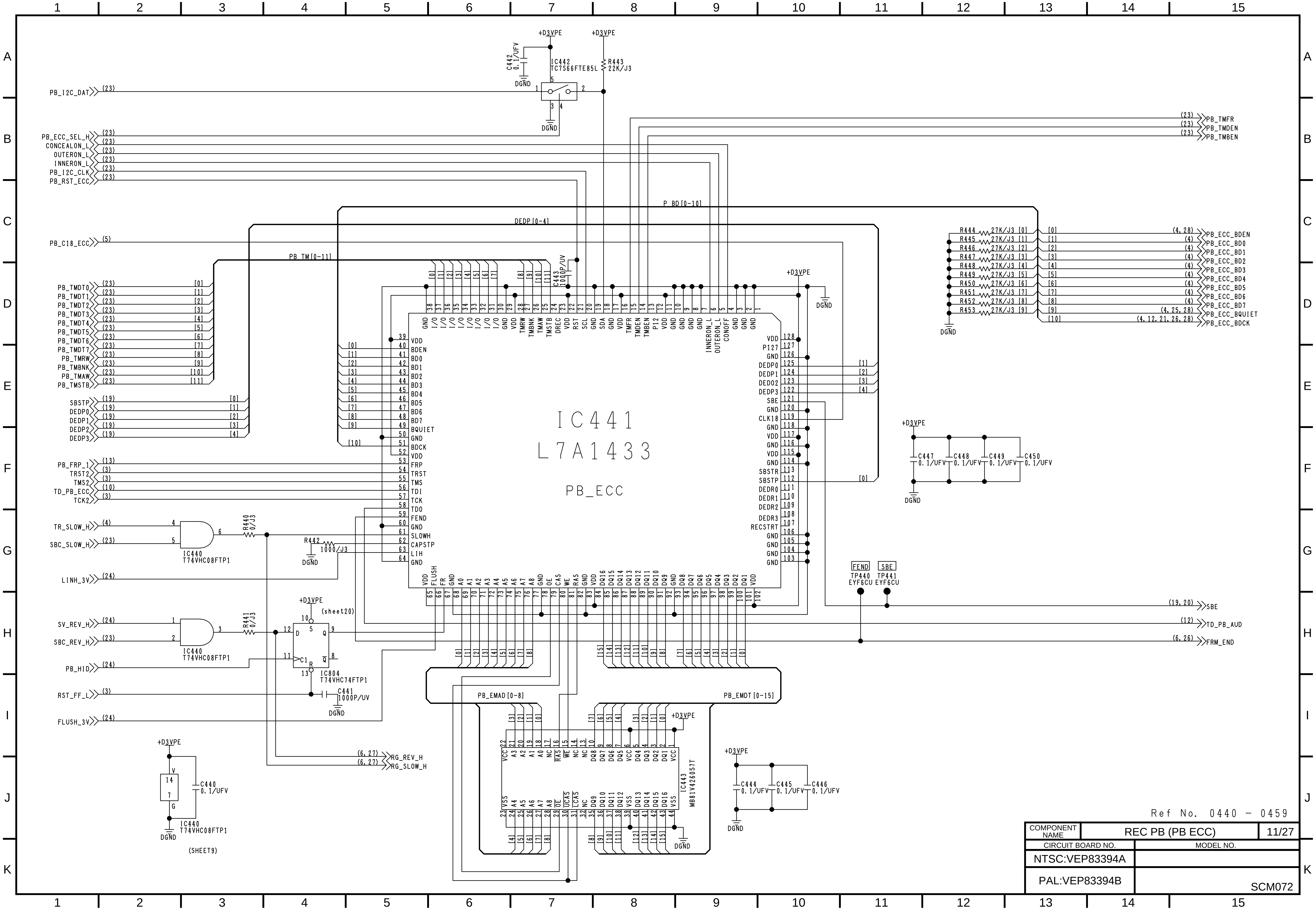

IC400
L7A1434
REC_DCI
DEDP_R3
DEDP_R2
DEDP_R1
DEDP_R0
SBSTP_R
RECSTRT
SBSTR
EREC_L_D
REC_H_D
PBDAT_RP
PBCLK_RP
REC_I2C_DAT
REC_I2C_CLK
REC_RST_DCI
ATFCLK
C404 1000P/UV
+D3VR
DGND
SBSTP_RP
TP400 EYF6CU
DEDR0
DEDR1
DEDR2
DEDR3
REC_C18_DCI
JP401
JP402
C400 0.1/UFV
C401 0.1/UFV
C402 0.1/UFV
C403 0.1/UFV
IC401 MC10H124MR
+D5V
-D5V
C406 0.1/UFV
C407 0.1/UFV
VCC
VEE
GND
IC440 T74VHC08FTP1
(sheet11)
+D3VRE
C409 0.1/UFV
C410 0.1/UFV
IC402 TC7S08FTE85L
IC403 TC7S08FTE85L
RECCTRLA_3V
RECCTRLB_3V
PBH_3V
RECI_3V
R401 0/J3
R402 470/J3
R403 0/J3
R404 470/J3
R405 PAT/J3
R406 PAT/J3
R407 0/J3
R408 470/J3
R409 0/J3
R410 470/J3
R411 PAT/J3
R412 PAT/J3
C408 0.1/UFV
COM
EE_CLK_N
EE_CLK_P
EE_DATA_N
EE_DATA_P
HSE
TD_TCTL
DREC_H
TR_SLOW_H
SV_REV_H
REC_FRP_1
REC_HID
REC_SPA
REC_PFP1
REC_PFP0
REC_TRP2
REC_TRP1
REC_TRP0
REC_TSR
TRST1
TMS1
TCK1
TD_REC_DCI
R400 10K/J3
C405 0.01/UBV
REC_SPEED
Ref No. 0400 - 0419

COMPONENT NAME	REC PB (REC DC 1)	09/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM070	


IC420
L7A1434
PB_DCI
SBSTP_P
DEDP_P0
DEDP_P1
DEDP_P2
DEDP_P3
PB_I2C_DAT (23)
PB_I2C_CLK (23)
PB_RST_DCI (23)
PBDAT_PB (20)
PBCLK_PB (20)
C420 1000P/UV
+D3VP
DGND
C422 0.1/UFV
C424 0.1/UFV
C426 0.1/UFV
C428 0.1/UFV
SBSTP_PB
TP421 EYF6CU
PB_C18_DCI (5)
R421 47/J3
CP420
R422 1M/J3
X420 VSX0645-B
41.85MHz
C423 10P/UV
C425 1000P/UV
L420 1R5U/LA
C427 18P/UV
JP422
JP423
TD_PB_ECC (11)
ATFCLK (9,20)
TR_SLOW_H (4)
SV_REV_H (24)
PB_FRP_1 (16)
PB_HID (24)
PB_PFP1 (24)
PB_PFP0 (24)
PB_TRP2 (24)
PB_TRP1 (24)
PB_TRP0 (24)
PB_TSR (19,24)
TD_PB_DCI (20)
TCK2 (3)
TMS2 (3)
TRST2 (3)
R420 10K/J3
C421 0.01/UBV
PB_SPEED (P1-20A)
1 DEDR0
2 DEDR1
3 DEDR2
4 DEDR3
5 VSS
6 SBSTR
7 SBSTP
8 VDD2
9 CLK18
10 VDD3
11 VSS
12 DEDP0
13 DEDP1
14 DEDP2
15 DEDP3
16 RECSTRT
17 FPS
18 TSR
19 TRP0
20 TRP1
21 TRP2
22 PFP0
23 PFP1
24 SPA
25 SPEED
26 ATFCLK
27 VDD3
28 VSS
29 VSS
30 VSS
31 VDD2
32 SCN
33 INHRST
34 DREC
35 SLOWH
36 FR
37 FRP
38 HID
39 THIN
40 SCKPB
41 TSTMODE
42 VSS
43 TRST
44 TMS
45 TCK
46 TDI
47 TDO
48 VSS
49 SYNCMNT
50 HSE
51 VDD2
52 VDD3
53 X1
54 X0
55 VSS
56 RECCTRLB
57 RECCTRLA
58 RECI
59 PBH
60 THOUT
61 SCKREC
62 PBDAT
63 TEST7
64 TEST6
65 TEST5
66 TEST4
67 VDD2
68 VSS
69 VSS
70 PBCLK
71 VSS
72 VSS
73 VDD3
74 TEST3
75 TEST2
76 TEST1
77 TEST0
78 SDA
79 SCL
80 RST
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

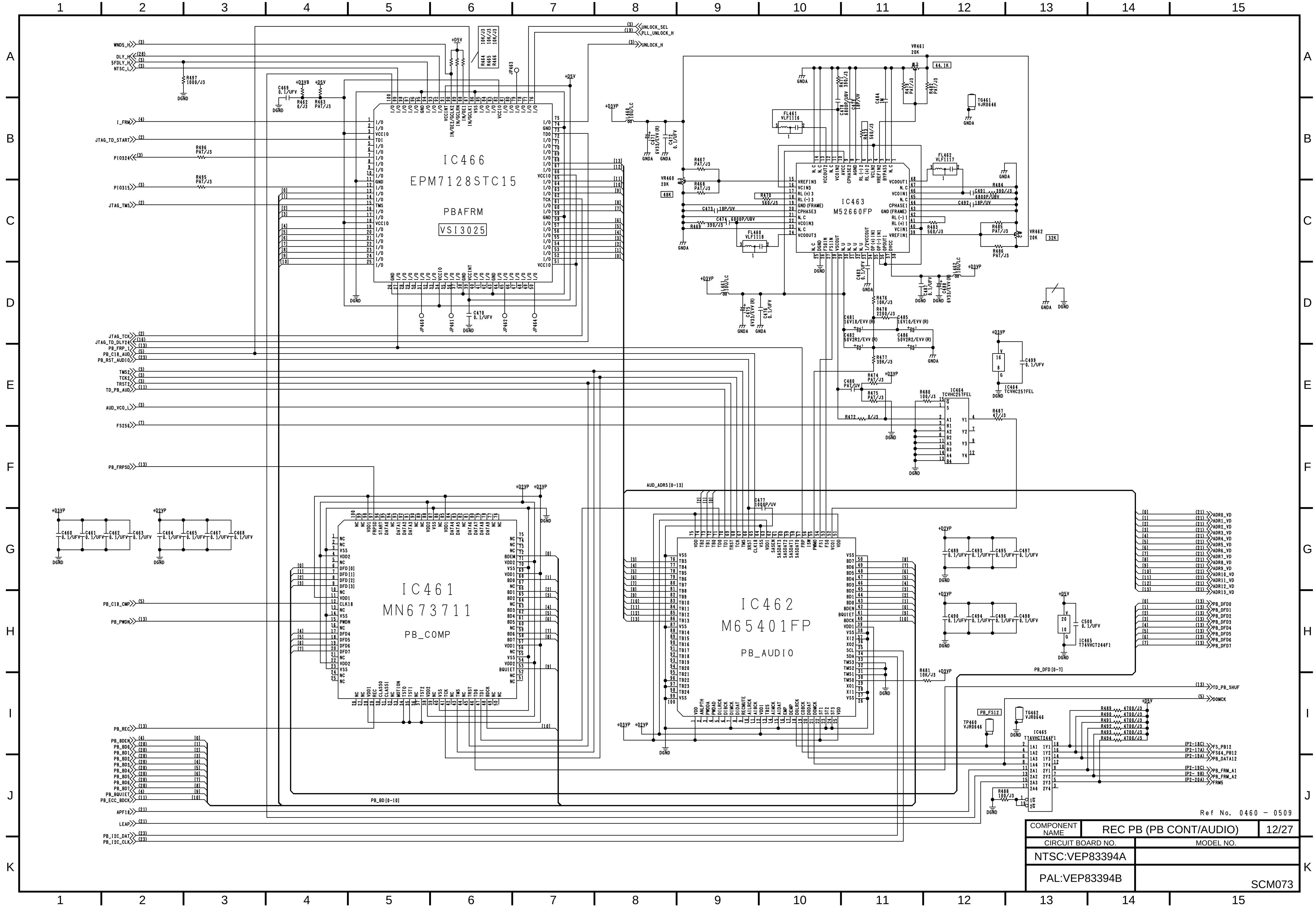
Ref No. 0420 - 0439

COMPONENT NAME	REC PB (PB DC 1)		10/27
CIRCUIT BOARD NO.		MODEL NO.	
NTSC:VEP83394A			
PAL:VEP83394B		SCM071	


IC441
L7A1433
PB_ECC
IC442
TC7S66FTE85L
C442 0.1/UFV
R443 22K/J3
+D3VPE
DGND
PB_I2C_DAT
PB_ECC_SEL_H
CONCEALON_L
OUTERON_L
INNERON_L
PB_I2C_CLK
PB_RST_ECC
PB_TMFR
PB_TMDEN
PB_TMBEN
P_BD[0-10]
DEDP[0-4]
PB_TM[0-11]
PB_C18_ECC
C443 1000P/UV
PB_TMDT0
PB_TMDT1
PB_TMDT2
PB_TMDT3
PB_TMDT4
PB_TMDT5
PB_TMDT6
PB_TMDT7
PB_TMRW
PB_TMBNK
PB_TMAW
PB_TMSTB
SBSTP
DEDP0
DEDP1
DEDP2
DEDP3
PB_FRP_1
TRST2
TMS2
TD_PB_ECC
TCK2
TR_SLOW_H
SBC_SLOW_H
LINH_3V
SV_REV_H
SBC_REV_H
PB_HID
RST_FF_L
FLUSH_3V
R440 0/J3
R441 0/J3
R442 1000/J3
IC440 T74VHC08FTP1
IC804 T74VHC74FTP1
C441 1000P/UV
(sheet20)
RG_REV_H
RG_SLOW_H
C440 0.1/UFV
(SHEET9)
R444 27K/J3
R445 27K/J3
R446 27K/J3
R447 27K/J3
R448 27K/J3
R449 27K/J3
R450 27K/J3
R451 27K/J3
R452 27K/J3
R453 27K/J3
PB_ECC_BDEN
PB_ECC_BD0
PB_ECC_BD1
PB_ECC_BD2
PB_ECC_BD3
PB_ECC_BD4
PB_ECC_BD5
PB_ECC_BD6
PB_ECC_BD7
PB_ECC_BQUIET
PB_ECC_BDCK
C447 0.1/UFV
C448 0.1/UFV
C449 0.1/UFV
C450 0.1/UFV
FEND
SBE
TP440 EYF6CU
TP441 EYF6CU
SBE
TD_PB_AUD
FRM_END
PB_EMAD[0-8]
PB_EMDT[0-15]
IC443 MB81V4260S7T
C444 0.1/UFV
C445 0.1/UFV
C446 0.1/UFV

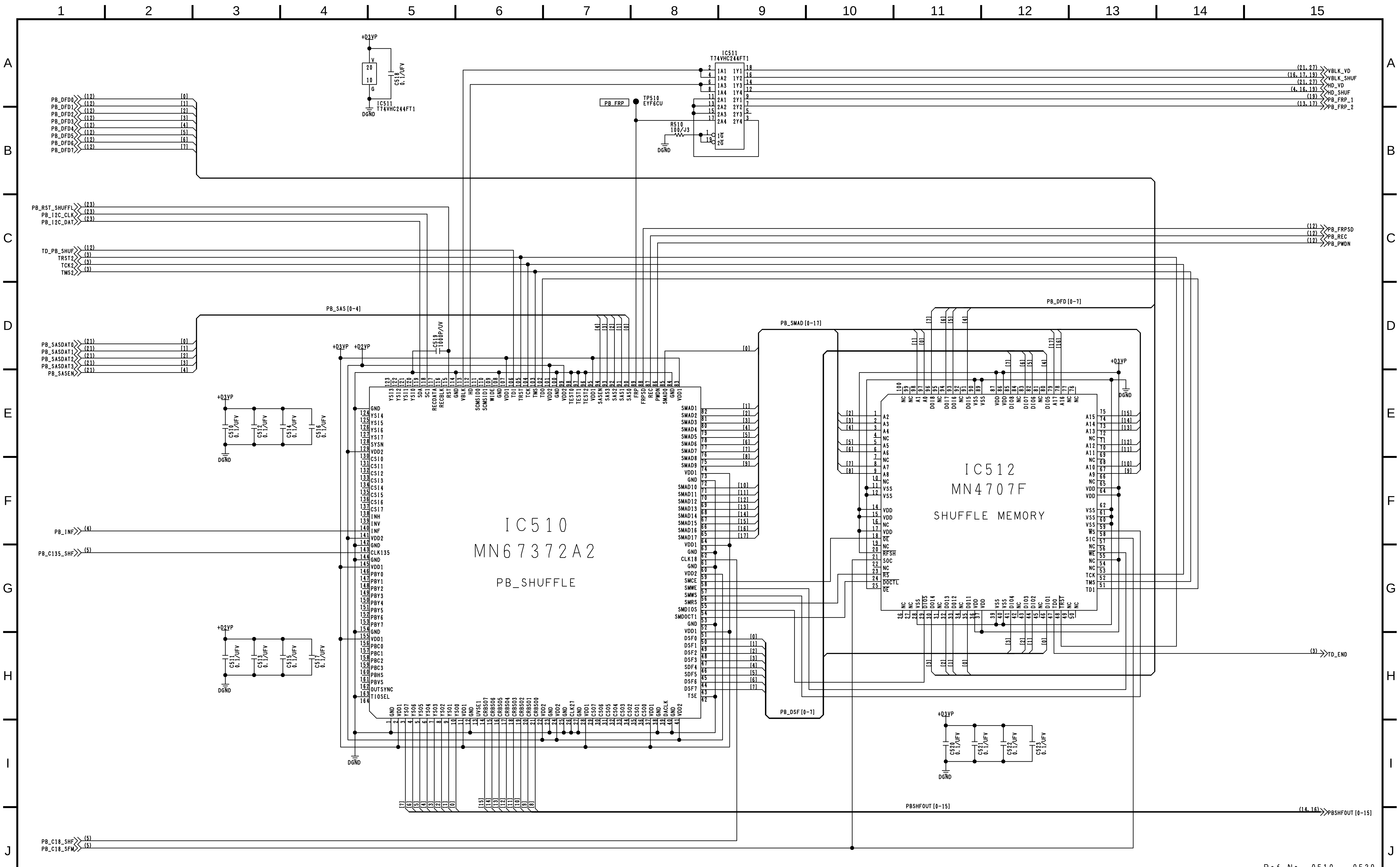
Ref No. 0440 - 0459

COMPONENT NAME	REC PB (PB ECC)	11/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM072	


IC466
EPM7128STC15
PBAFRM
VSI3025
IC463
M52660FP
IC461
MN673711
PB_COMP
IC462
M65401FP
PB_AUDIO
IC464
TCVHC257FEL
IC465
T74VHCT244F1
WND5_H
DLY_H
SFDLY_H
NTSC_L
I_FRM
JTAG_TD_START
PIO324
PIO315
JTAG_TMS
JTAG_TCK
JTAG_TD_DLY24
PB_FRP_1
PB_C18_AUD
PB_RST_AUDIO
TMS2
TCK2
TRST2
TD_PB_AUD
AUD_VCO_L
FS256
PB_FRP5D
PB_C18_CMP
PB_PWDN
PB_REC
PB_BDEN
PB_BD0
PB_BD1
PB_BD2
PB_BD3
PB_BD4
PB_BD5
PB_BD6
PB_BD7
PB_BQUIET
PB_ECC_BDCK
APF18
LEAP
PB_I2C_DAT
PB_I2C_CLK
UNLOCK_SEL
PLL_UNLOCK_H
UNLOCK_H
AUD_ADRS[0-13]
PB_BD[0-10]
PB_DFD[0-7]
ADR0_VD
ADR1_VD
ADR2_VD
ADR3_VD
ADR4_VD
ADR5_VD
ADR6_VD
ADR7_VD
ADR8_VD
ADR9_VD
ADR10_VD
ADR11_VD
ADR12_VD
ADR13_VD
PB_DFD0
PB_DFD1
PB_DFD2
PB_DFD3
PB_DFD4
PB_DFD5
PB_DFD6
PB_DFD7
TD_PB_SHUF
DOMCK
FS_PB12
FS64_PB12
PB_DATA12
PB_FRM_A1
PB_FRM_A2
FRM5
VR461 20K
44.1K
VR460 20K
48K
VR462 20K
32K
TG461 VJR0646
TG462 VJR0646
TP460 VJR0646
PB_FS12
FL461 VLF1116
FL462 VLF1117
FL460 VLF1118
+D5V
+D3VP
+D3VB
DGND
GNDA

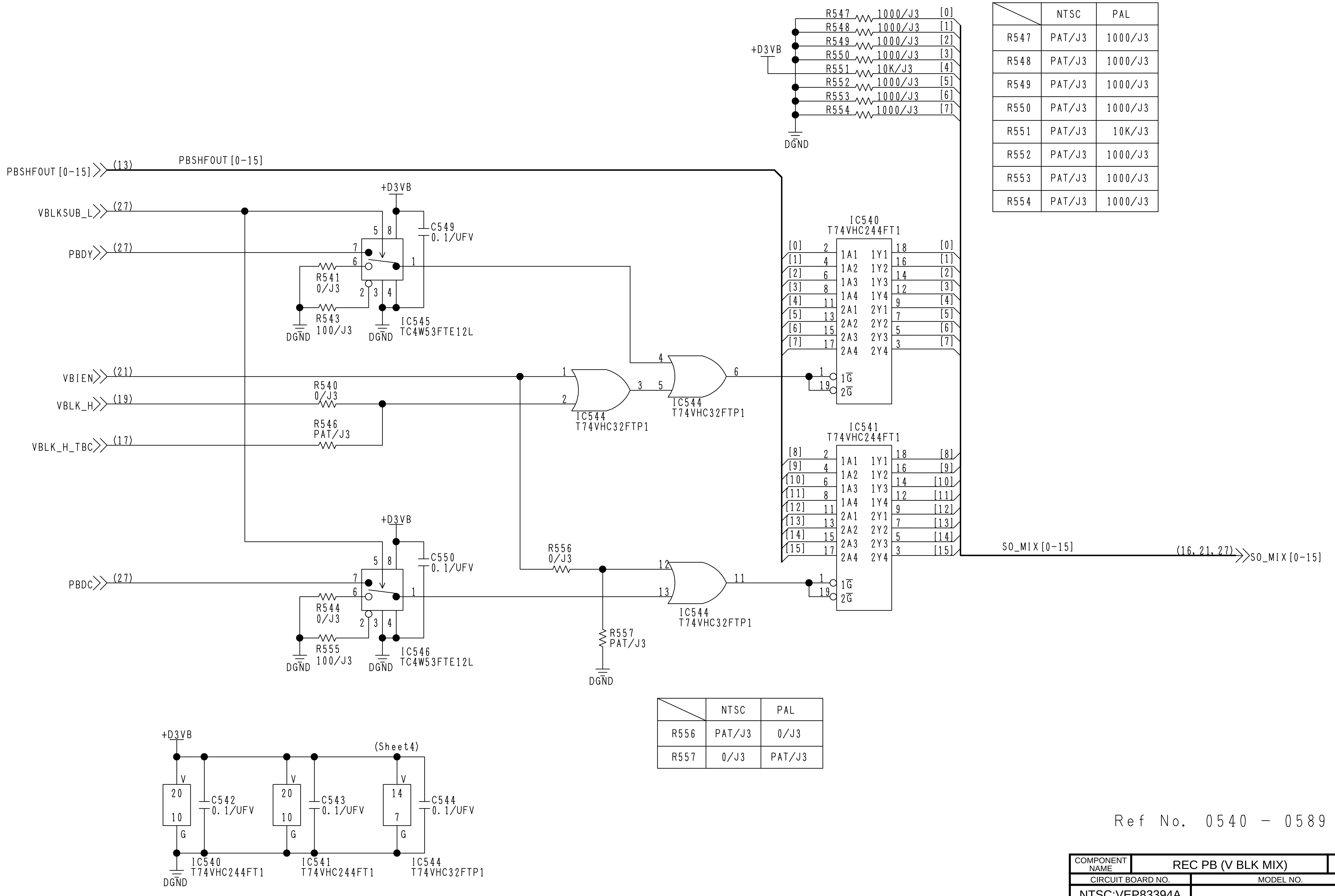
Ref No. 0460 - 0509

COMPONENT NAME	REC PB (PB CONT/AUDIO)	12/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM073	


IC510
MN67372A2
PB_SHUFFLE
IC512
MN4707F
SHUFFLE MEMORY
IC511
T74VHC244FT1
TP510
EYF6CU
R510
100/J3
PB_FRP
C518
0.1/UFV
C519
1000P/UV
+D3VP
+D2VP
DGND
PB_DFD0
PB_DFD1
PB_DFD2
PB_DFD3
PB_DFD4
PB_DFD5
PB_DFD6
PB_DFD7
PB_RST_SHUFFL
PB_I2C_CLK
PB_I2C_DAT
TD_PB_SHUF
TRST2
TCK2
TMS2
PB_SAS[0-4]
PB_SASDAT0
PB_SASDAT1
PB_SASDAT2
PB_SASDAT3
PB_SASEN
PB_INF
PB_C135_SHF
PB_C18_SHF
PB_C18_SFM
VBLK_VD
VBLK_SHUF
HD_VD
HD_SHUF
PB_FRP_1
PB_FRP_2
PB_FRPSD
PB_REC
PB_PWDN
PB_DFD[0-7]
PB_SMAD[0-17]
PB_DSF[0-7]
TD_END
PBSHFOUT[0-15]
C510 0.1/UFV
C511 0.1/UFV
C512 0.1/UFV
C513 0.1/UFV
C514 0.1/UFV
C515 0.1/UFV
C516 0.1/UFV
C517 0.1/UFV
C520 0.1/UFV
C521 0.1/UFV
C522 0.1/UFV
C523 0.1/UFV
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

Ref No. 0510 - 0539

COMPONENT NAME	REC PB (PB SHUFFLE)	13/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM074	


R547 1000/J3 [0]
R548 1000/J3 [1]
R549 1000/J3 [2]
R550 1000/J3 [3]
R551 10K/J3 [4]
R552 1000/J3 [5]
R553 1000/J3 [6]
R554 1000/J3 [7]
+D3VB
DGND
PBSHFOUT[0-15] (13)
PBSHFOUT[0-15]
VBLKSUB_L (27)
PBDY (27)
VBIEN (21)
VBLK_H (19)
VBLK_H_TBC (17)
PBDC (27)
+D3VB
C549 0.1/UFV
R541 0/J3
R543 100/J3
DGND
IC545 TC4W53FTE12L
R540 0/J3
R546 PAT/J3
IC544 T74VHC32FTP1
IC544 T74VHC32FTP1
IC540 T74VHC244FT1
1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4
1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4
1G 2G
IC541 T74VHC244FT1
[8] [9] [10] [11] [12] [13] [14] [15]
SO_MIX[0-15]
(16, 21, 27) SO_MIX[0-15]
C550 0.1/UFV
R544 0/J3
R555 100/J3
IC546 TC4W53FTE12L
R556 0/J3
R557 PAT/J3
IC544 T74VHC32FTP1
(Sheet4)
C542 0.1/UFV
C543 0.1/UFV
C544 0.1/UFV
IC540 T74VHC244FT1
IC541 T74VHC244FT1
IC544 T74VHC32FTP1

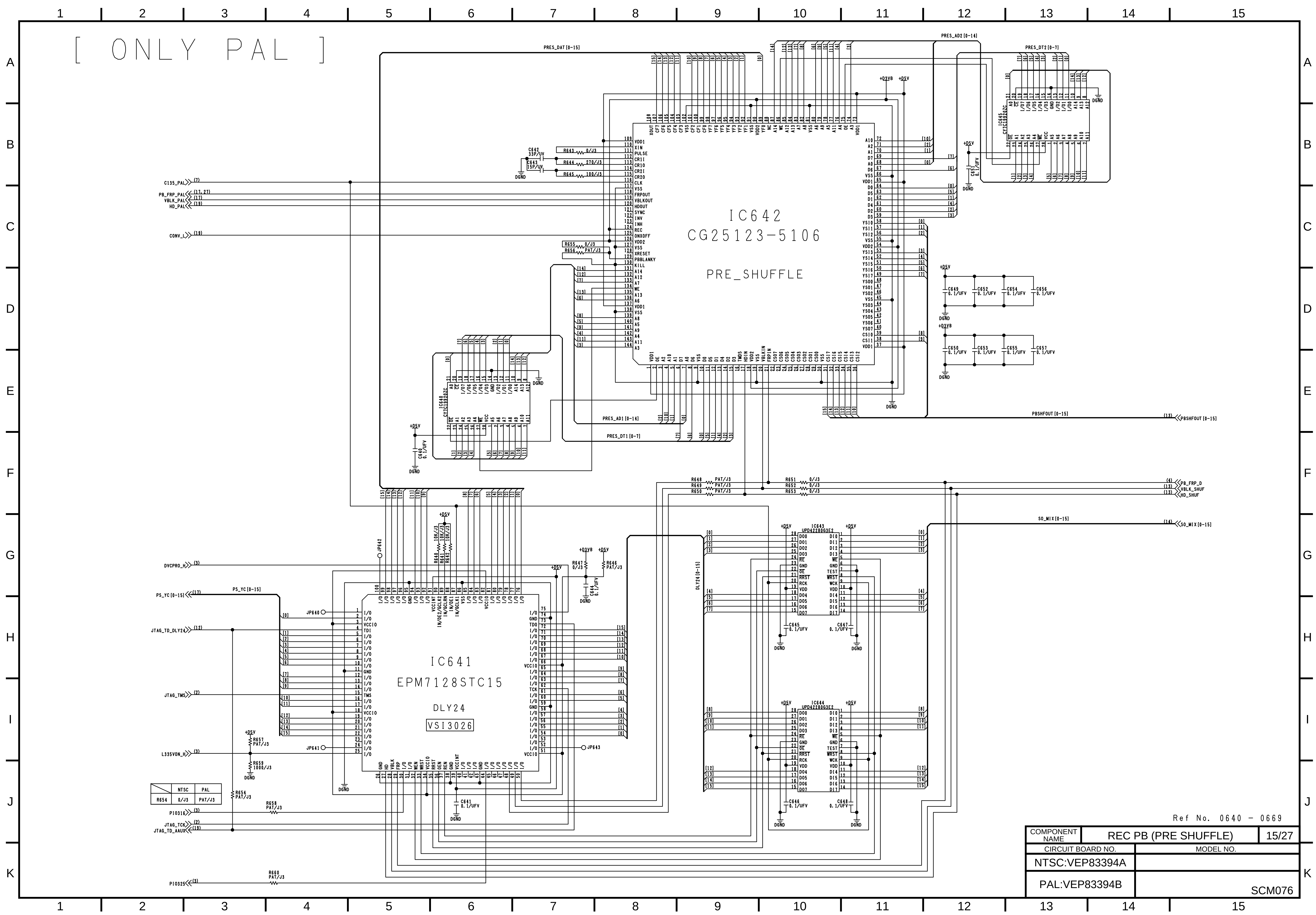
	NTSC	PAL
R547	PAT/J3	1000/J3
R548	PAT/J3	1000/J3
R549	PAT/J3	1000/J3
R550	PAT/J3	1000/J3
R551	PAT/J3	10K/J3
R552	PAT/J3	1000/J3
R553	PAT/J3	1000/J3
R554	PAT/J3	1000/J3

	NTSC	PAL
R556	PAT/J3	0/J3
R557	0/J3	PAT/J3

Ref No. 0540 – 0589

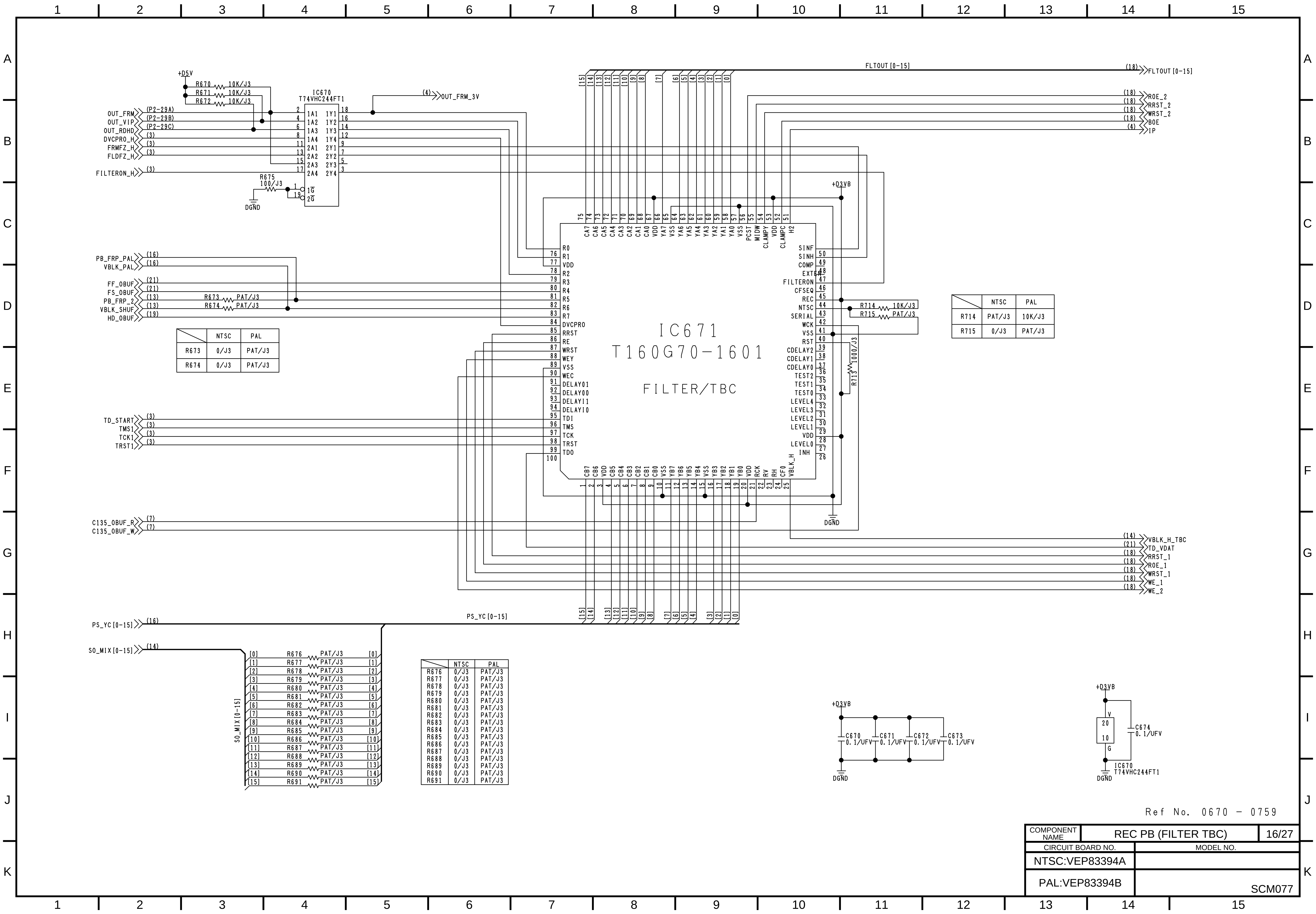
COMPONENT NAME	REC PB (V BLK MIX)	14/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM075	

[ONLY PAL]


IC642
CG25123-5106
PRE_SHUFFLE
IC641
EPM7128STC15
DLY24
VSI3026
IC640
CY7C1019DZC
IC645
CY7C1019DZC
IC643
UPD42280G3E2
IC644
UPD42280G3E2
PRES_DAT[0-15]
PRES_AD2[0-14]
PRES_DT2[0-7]
PRES_AD1[0-14]
PRES_DT1[0-7]
PBSHFOUT[0-15]
SO_MIX[0-15]
PS_YC[0-15]
DLY24[0-15]
C135_PAL
PB_FRP_PAL
VBLK_PAL
HD_PAL
CONV_L
DVCPRO_H
PS_YC[0-15]
JTAG_TD_DLY24
JTAG_TMS
L335VON_H
PIO318
JTAG_TCK
JTAG_TD_AAUX
PIO325
PB_FRP_D
VBLK_SHUF
HD_SHUF
PBSHFOUT[0-15]
SO_MIX[0-15]
JP640
JP641
JP642
JP643
+D5V
+D3V8
DGND
R654 NTSC 0/J3 PAL PAT/J3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

Ref No. 0640 - 0669

COMPONENT NAME	REC PB (PRE SHUFFLE)	15/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM076	


+D5V
R670 10K/J3
R671 10K/J3
R672 10K/J3
IC670
T74VHC244FT1
OUT_FRM (P2-29A)
OUT_VIP (P2-29B)
OUT_RDHD (P2-29C)
DVCPRO_H (3)
FRMFZ_H (3)
FLDFZ_H (3)
FILTERON_H (3)
R675 100/J3
DGND
(4) OUT_FRM_3V
FLTOUT[0-15]
(18) FLTOUT[0-15]
(18) ROE_2
(18) RRST_2
(18) WRST_2
(18) BOE
(4) IP
+D3VB
PB_FRP_PAL (16)
VBLK_PAL (16)
FF_OBUF (21)
FS_OBUF (21)
PB_FRP_2 (13)
VBLK_SHUF (13)
HD_OBUF (19)
R673 PAT/J3
R674 PAT/J3
IC671
T160G70-1601
FILTER/TBC
R714 10K/J3
R715 PAT/J3
R713 1000/J3
TD_START (3)
TMS1 (3)
TCK1 (3)
TRST1 (3)
C135_OBUF_R (7)
C135_OBUF_W (7)
(14) VBLK_H_TBC
(21) TD_VDAT
(18) RRST_1
(18) ROE_1
(18) WRST_1
(18) WE_1
(18) WE_2
PS_YC[0-15] (16)
PS_YC[0-15]
SO_MIX[0-15] (14)
SO_MIX[0-15]
R676 – R691 PAT/J3
C670 0.1/UFV
C671 0.1/UFV
C672 0.1/UFV
C673 0.1/UFV
C674 0.1/UFV
IC670 T74VHC244FT1

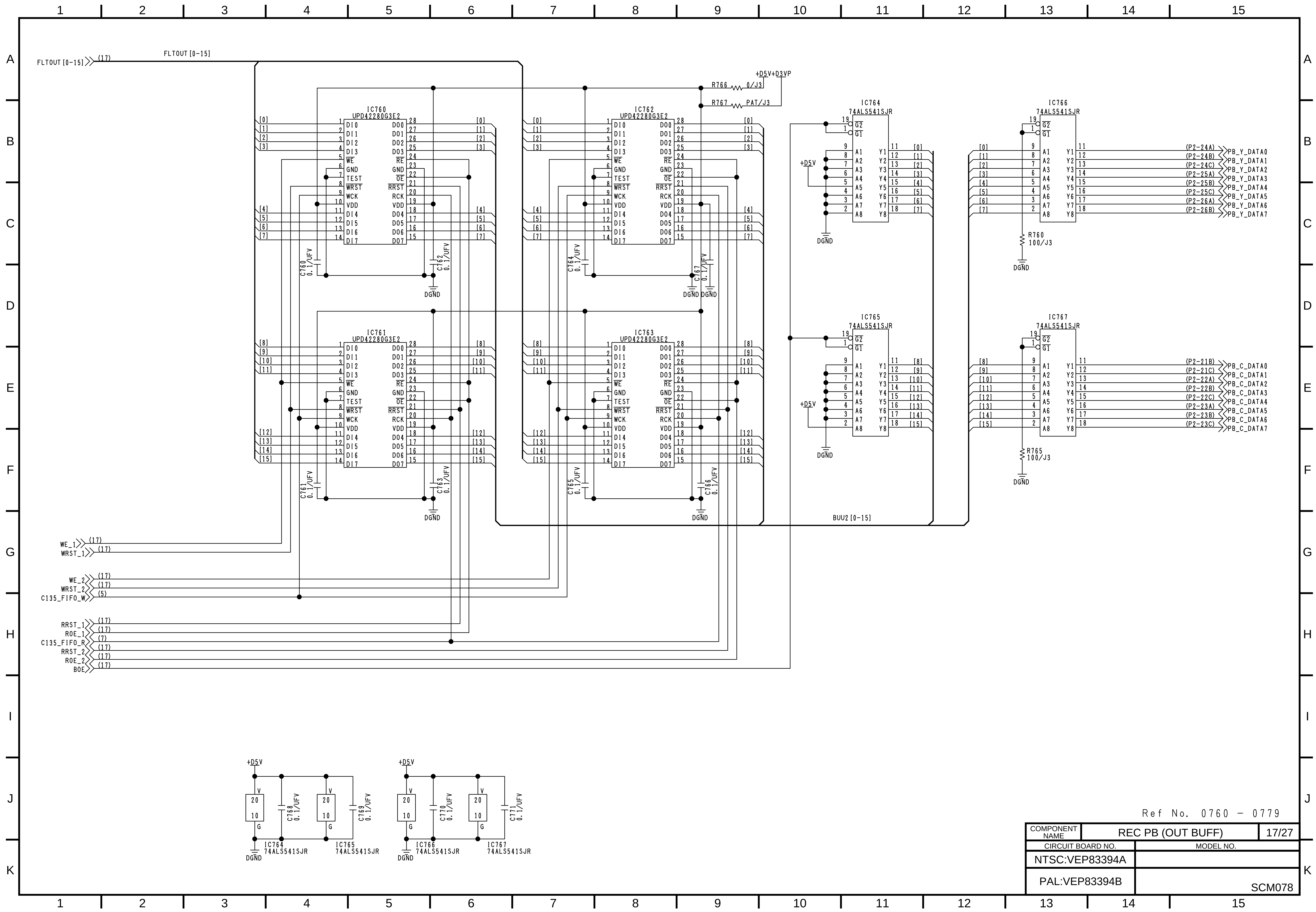
	NTSC	PAL
R673	0/J3	PAT/J3
R674	0/J3	PAT/J3

	NTSC	PAL
R714	PAT/J3	10K/J3
R715	0/J3	PAT/J3

	NTSC	PAL
R676	0/J3	PAT/J3
R677	0/J3	PAT/J3
R678	0/J3	PAT/J3
R679	0/J3	PAT/J3
R680	0/J3	PAT/J3
R681	0/J3	PAT/J3
R682	0/J3	PAT/J3
R683	0/J3	PAT/J3
R684	0/J3	PAT/J3
R685	0/J3	PAT/J3
R686	0/J3	PAT/J3
R687	0/J3	PAT/J3
R688	0/J3	PAT/J3
R689	0/J3	PAT/J3
R690	0/J3	PAT/J3
R691	0/J3	PAT/J3

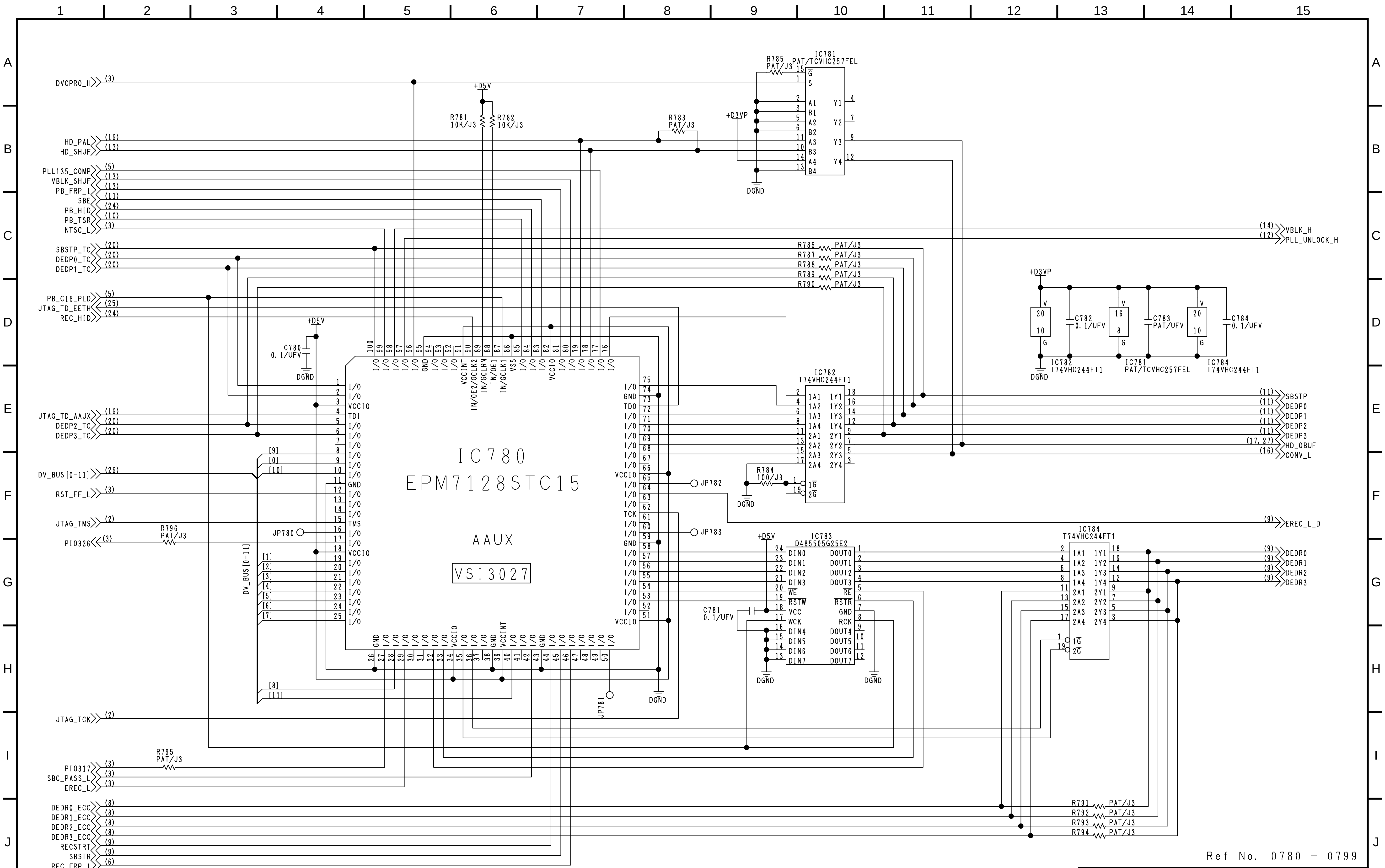
Ref No. 0670 – 0759

COMPONENT NAME	REC PB (FILTER TBC)	16/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM077	

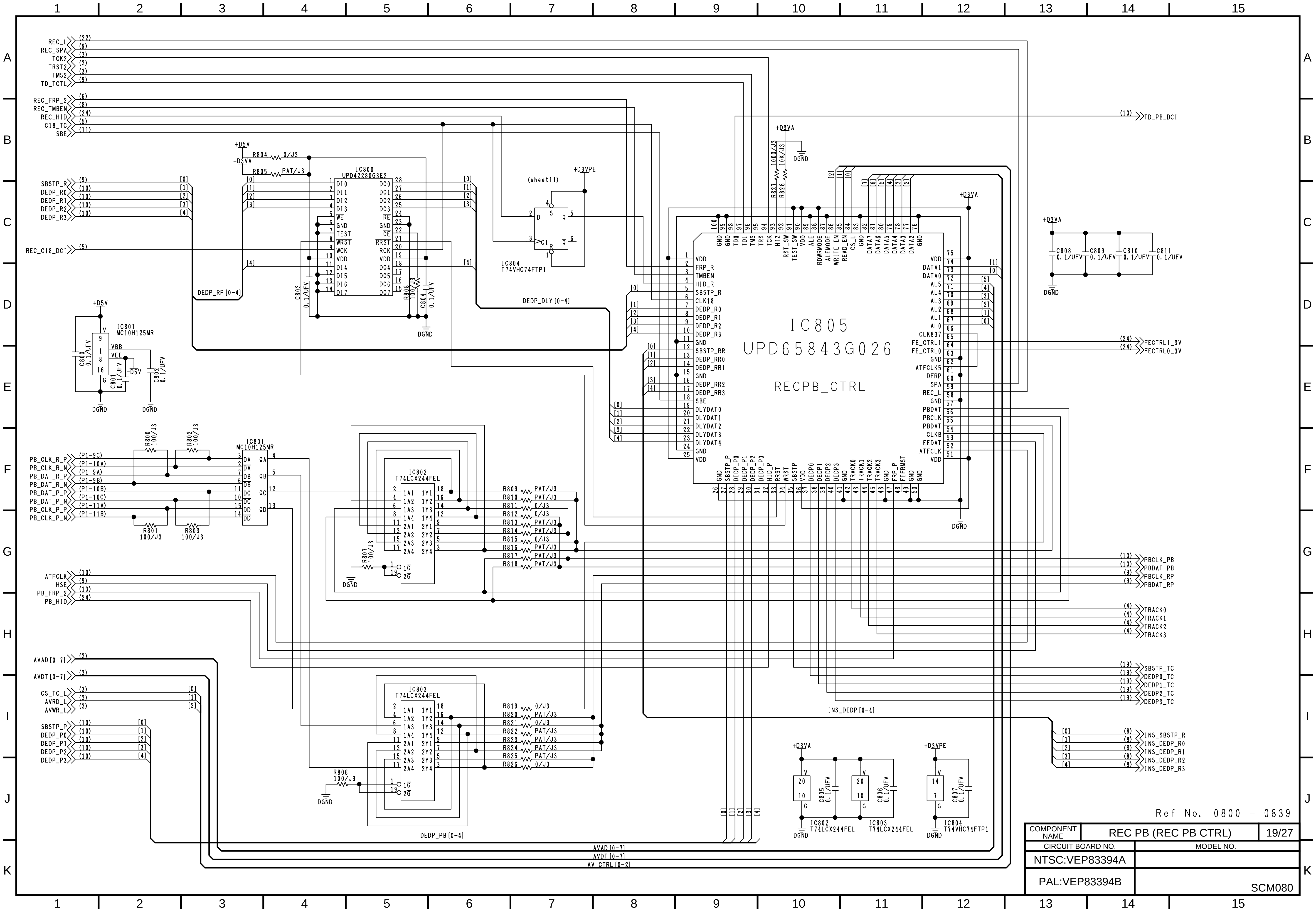

FLTOUT[0-15]
(17)
FLTOUT[0-15]
+D5V
+D3VP
R766 0/J3
R767 PAT/J3
IC760
UPD42280G3E2
IC761
UPD42280G3E2
IC762
UPD42280G3E2
IC763
UPD42280G3E2
DI0
DI1
DI2
DI3
WE
GND
TEST
WRST
WCK
VDD
DI4
DI5
DI6
DI7
DO0
DO1
DO2
DO3
RE
GND
OE
RRST
RCK
VDD
DO4
DO5
DO6
DO7
C760 0.1/UFV
C761 0.1/UFV
C762 0.1/UFV
C763 0.1/UFV
C764 0.1/UFV
C765 0.1/UFV
C766 0.1/UFV
C767 0.1/UFV
DGND
IC764
74ALS541SJR
IC765
74ALS541SJR
IC766
74ALS541SJR
IC767
74ALS541SJR
G2
G1
A1
A2
A3
A4
A5
A6
A7
A8
Y1
Y2
Y3
Y4
Y5
Y6
Y7
Y8
R760 100/J3
R765 100/J3
(P2-24A) PB_Y_DATA0
(P2-24B) PB_Y_DATA1
(P2-24C) PB_Y_DATA2
(P2-25A) PB_Y_DATA3
(P2-25B) PB_Y_DATA4
(P2-25C) PB_Y_DATA5
(P2-26A) PB_Y_DATA6
(P2-26B) PB_Y_DATA7
(P2-21B) PB_C_DATA0
(P2-21C) PB_C_DATA1
(P2-22A) PB_C_DATA2
(P2-22B) PB_C_DATA3
(P2-22C) PB_C_DATA4
(P2-23A) PB_C_DATA5
(P2-23B) PB_C_DATA6
(P2-23C) PB_C_DATA7
BUU2[0-15]
WE_1 (17)
WRST_1 (17)
WE_2 (17)
WRST_2 (17)
C135_FIFO_W (5)
RRST_1 (17)
ROE_1 (17)
C135_FIFO_R (7)
RRST_2 (17)
ROE_2 (17)
BOE (17)
C768 0.1/UFV
C769 0.1/UFV
C770 0.1/UFV
C771 0.1/UFV
IC764 74ALS541SJR
IC765 74ALS541SJR
IC766 74ALS541SJR
IC767 74ALS541SJR
V
20
10
G

Ref No. 0760 − 0779

COMPONENT NAME	REC PB (OUT BUFF)	17/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM078	

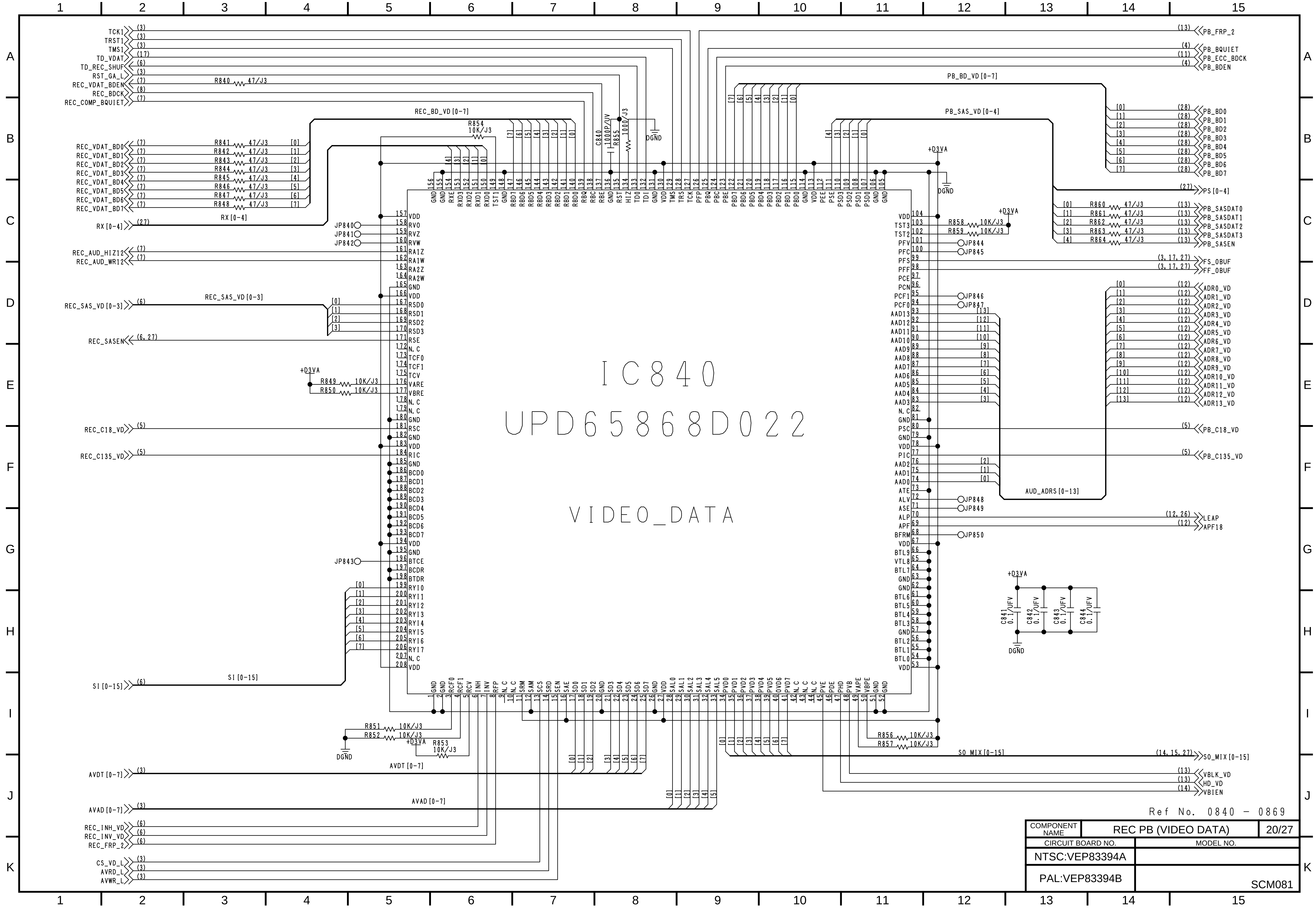

DVCPRO_H (3)
HD_PAL (16)
HD_SHUF (13)
PLL135_COMP (5)
VBLK_SHUF (13)
PB_FRP_1 (13)
SBE (11)
PB_HID (24)
PB_TSR (10)
NTSC_L (3)
SBSTP_TC (20)
DEDP0_TC (20)
DEDP1_TC (20)
PB_C18_PLD (5)
JTAG_TD_EETH (25)
REC_HID (24)
JTAG_TD_AAUX (16)
DEDP2_TC (20)
DEDP3_TC (20)
DV_BUS[0-11] (26)
RST_FF_L (3)
JTAG_TMS (2)
PIO326 (3)
JTAG_TCK (2)
PIO317 (3)
SBC_PASS_L (3)
EREC_L (3)
DEDR0_ECC (8)
DEDR1_ECC (8)
DEDR2_ECC (8)
DEDR3_ECC (8)
RECSTRT (9)
SBSTR (9)
REC_FRP_1 (6)
IC780
EPM7128STC15
AAUX
VSI3027
+D5V
C780 0.1/UFV
DGND
R781 10K/J3
R782 10K/J3
R783 PAT/J3
R785 PAT/J3
+D3VP
IC781 PAT/TCVHC257FEL
G S A1 B1 A2 B2 A3 B3 A4 B4 Y1 Y2 Y3 Y4
(14) VBLK_H
(12) PLL_UNLOCK_H
R786 PAT/J3
R787 PAT/J3
R788 PAT/J3
R789 PAT/J3
R790 PAT/J3
IC782 T74VHC244FT1
1A1 1A2 1A3 1A4 2A1 2A2 2A3 2A4 1Y1 1Y2 1Y3 1Y4 2Y1 2Y2 2Y3 2Y4 1G 2G
R784 100/J3
(11) SBSTP
(11) DEDP0
(11) DEDP1
(11) DEDP2
(11) DEDP3
(17, 27) HD_OBUF
(16) CONV_L
JP782
JP783
JP780
JP781
(9) EREC_L_D
C782 0.1/UFV
C783 PAT/UFV
C784 0.1/UFV
IC782 T74VHC244FT1
IC781 PAT/TCVHC257FEL
IC784 T74VHC244FT1
IC783 D485505G25E2
DIN0 DIN1 DIN2 DIN3 WE RSTW VCC WCK DIN4 DIN5 DIN6 DIN7
DOUT0 DOUT1 DOUT2 DOUT3 RE RSTR GND RCK DOUT4 DOUT5 DOUT6 DOUT7
C781 0.1/UFV
IC784 T74VHC244FT1
(9) DEDR0
(9) DEDR1
(9) DEDR2
(9) DEDR3
R791 PAT/J3
R792 PAT/J3
R793 PAT/J3
R794 PAT/J3
DV_BUS[0-11]
Ref No. 0780 - 0799
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

COMPONENT NAME	REC PB (AAUX ERR/SBC PASS)	18/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM079	


REC_L
REC_SPA
TCK2
TRST2
TMS2
TD_TCTL
REC_FRP_2
REC_TMBEN
REC_HID
C18_TC
SBE
SBSTP_R
DEDP_R0
DEDP_R1
DEDP_R2
DEDP_R3
REC_C18_DCI
DEDP_RP[0-4]
DEDP_DLY[0-4]
+D5V
+D3VA
R804 0/J3
R805 PAT/J3
IC800
UPD42280G3E2
DI0
DI1
DI2
DI3
WE
GND
TEST
WRST
WCK
VDD
DI4
DI5
DI6
DI7
DO0
DO1
DO2
DO3
RE
GND
OE
RRST
RCK
VDD
DO4
DO5
DO6
DO7
C803 0.1/UFV
R808 100/J3
C804 0.1/UFV
DGND
(sheet11)
+D3VPE
IC804
T74VHC74FTP1
IC801
MC10H125MR
C800 0.1/UFV
C801 0.1/UFV
C802 0.1/UFV
-D5V
VBB
VEE
PB_CLK_R_P
PB_CLK_R_N
PB_DAT_R_P
PB_DAT_R_N
PB_DAT_P_P
PB_DAT_P_N
PB_CLK_P_P
PB_CLK_P_N
R800 100/J3
R802 100/J3
R801 100/J3
R803 100/J3
IC802
T74LCX244FEL
R807 100/J3
R809 PAT/J3
R810 PAT/J3
R811 0/J3
R812 0/J3
R813 PAT/J3
R814 PAT/J3
R815 0/J3
R816 PAT/J3
R817 PAT/J3
R818 PAT/J3
ATFCLK
HSE
PB_FRP_2
PB_HID
AVAD[0-7]
AVDT[0-7]
CS_TC_L
AVRD_L
AVWR_L
SBSTP_P
DEDP_P0
DEDP_P1
DEDP_P2
DEDP_P3
IC803
T74LCX244FEL
R806 100/J3
R819 0/J3
R820 PAT/J3
R821 0/J3
R822 PAT/J3
R823 PAT/J3
R824 PAT/J3
R825 PAT/J3
R826 0/J3
DEDP_PB[0-4]
AVAD[0-7]
AVDT[0-7]
AV_CTRL[0-2]
+D3VA
R827 1000/J3
R828 10K/J3
IC805
UPD65843G026
RECPB_CTRL
INS_DEDP[0-4]
TD_PB_DCI
FECTRL1_3V
FECTRL0_3V
C808 0.1/UFV
C809 0.1/UFV
C810 0.1/UFV
C811 0.1/UFV
PBCLK_PB
PBDAT_PB
PBCLK_RP
PBDAT_RP
TRACK0
TRACK1
TRACK2
TRACK3
SBSTP_TC
DEDP0_TC
DEDP1_TC
DEDP2_TC
DEDP3_TC
INS_SBSTP_R
INS_DEDP_R0
INS_DEDP_R1
INS_DEDP_R2
INS_DEDP_R3
C805 0.1/UFV
C806 0.1/UFV
C807 0.1/UFV
IC802
T74LCX244FEL
IC803
T74LCX244FEL
IC804
T74VHC74FTP1

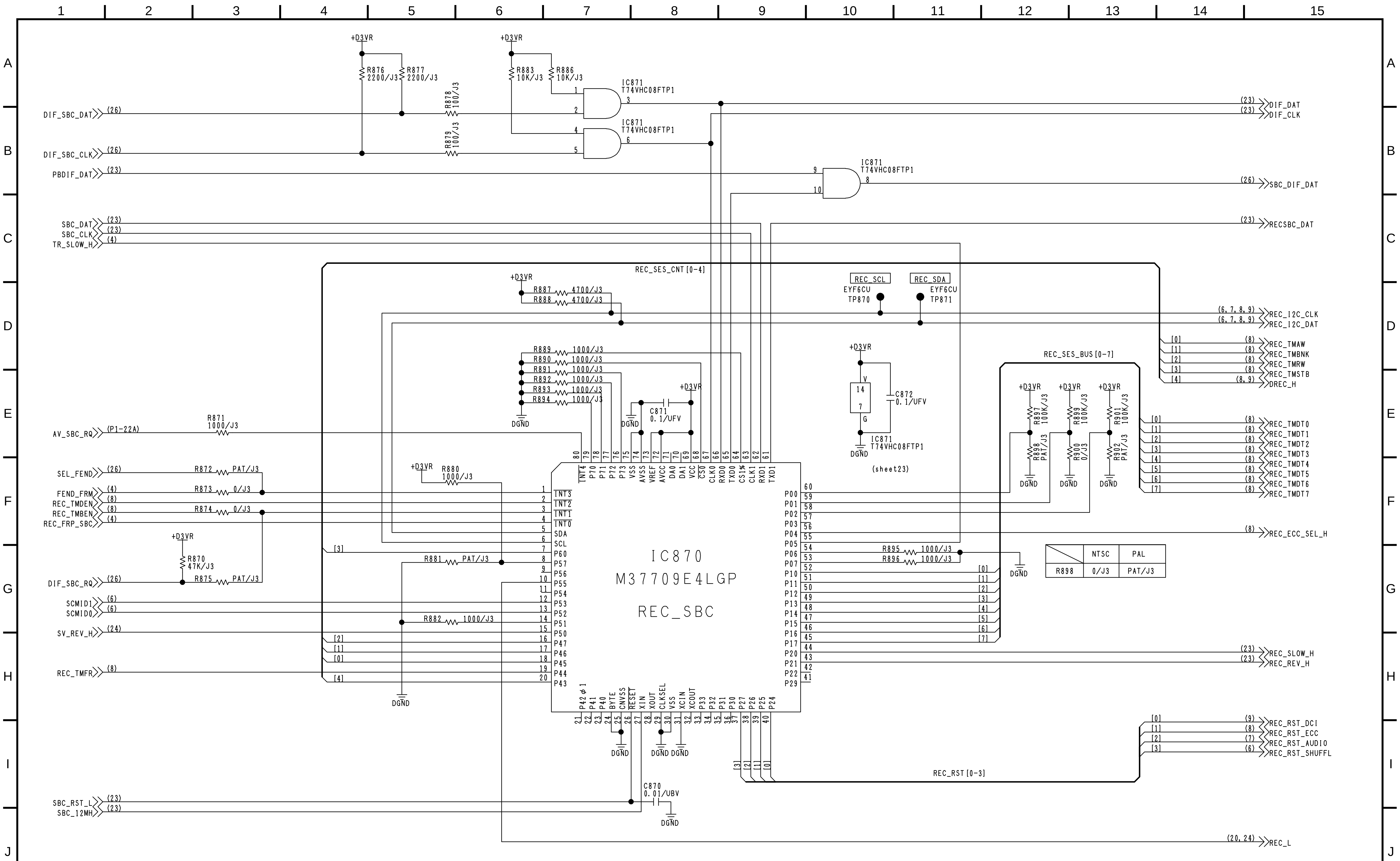
Ref No. 0800 - 0839

COMPONENT NAME	REC PB (REC PB CTRL)	19/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM080	


IC840
UPD65868D022
VIDEO_DATA
TCK1
TRST1
TMS1
TD_VDAT
TD_REC_SHUF
RST_GA_L
REC_VDAT_BDEN
REC_BDCK
REC_COMP_BQUIET
REC_BD_VD[0-7]
REC_VDAT_BD0
REC_VDAT_BD1
REC_VDAT_BD2
REC_VDAT_BD3
REC_VDAT_BD4
REC_VDAT_BD5
REC_VDAT_BD6
REC_VDAT_BD7
RX[0-4]
REC_AUD_HIZ12
REC_AUD_WR12
REC_SAS_VD[0-3]
REC_SASEN
REC_C18_VD
REC_C135_VD
SI[0-15]
AVDT[0-7]
AVAD[0-7]
REC_INH_VD
REC_INV_VD
REC_FRP_2
CS_VD_L
AVRD_L
AVWR_L
R840 47/J3
R841 47/J3
R842 47/J3
R843 47/J3
R844 47/J3
R845 47/J3
R846 47/J3
R847 47/J3
R848 47/J3
R849 10K/J3
R850 10K/J3
R851 10K/J3
R852 10K/J3
R853 10K/J3
R854 10K/J3
R855 100Ω/J3
C840 1000P/UV
R856 10K/J3
R857 10K/J3
R858 10K/J3
R859 10K/J3
R860 47/J3
R861 47/J3
R862 47/J3
R863 47/J3
R864 47/J3
C841 0.1/UFV
C842 0.1/UFV
C843 0.1/UFV
C844 0.1/UFV
+D3VA
DGND
JP840
JP841
JP842
JP843
JP844
JP845
JP846
JP847
JP848
JP849
JP850
PB_FRP_2
PB_BQUIET
PB_ECC_BDCK
PB_BDEN
PB_BD_VD[0-7]
PB_BD0
PB_BD1
PB_BD2
PB_BD3
PB_BD4
PB_BD5
PB_BD6
PB_BD7
PB_SAS_VD[0-4]
PS[0-4]
PB_SASDAT0
PB_SASDAT1
PB_SASDAT2
PB_SASDAT3
PB_SASEN
FS_OBUF
FF_OBUF
ADR0_VD
ADR1_VD
ADR2_VD
ADR3_VD
ADR4_VD
ADR5_VD
ADR6_VD
ADR7_VD
ADR8_VD
ADR9_VD
ADR10_VD
ADR11_VD
ADR12_VD
ADR13_VD
AUD_ADRS[0-13]
PB_C18_VD
PB_C135_VD
LEAP
APF18
SO_MIX[0-15]
VBLK_VD
HD_VD
VBIEN

Ref No. 0840 − 0869

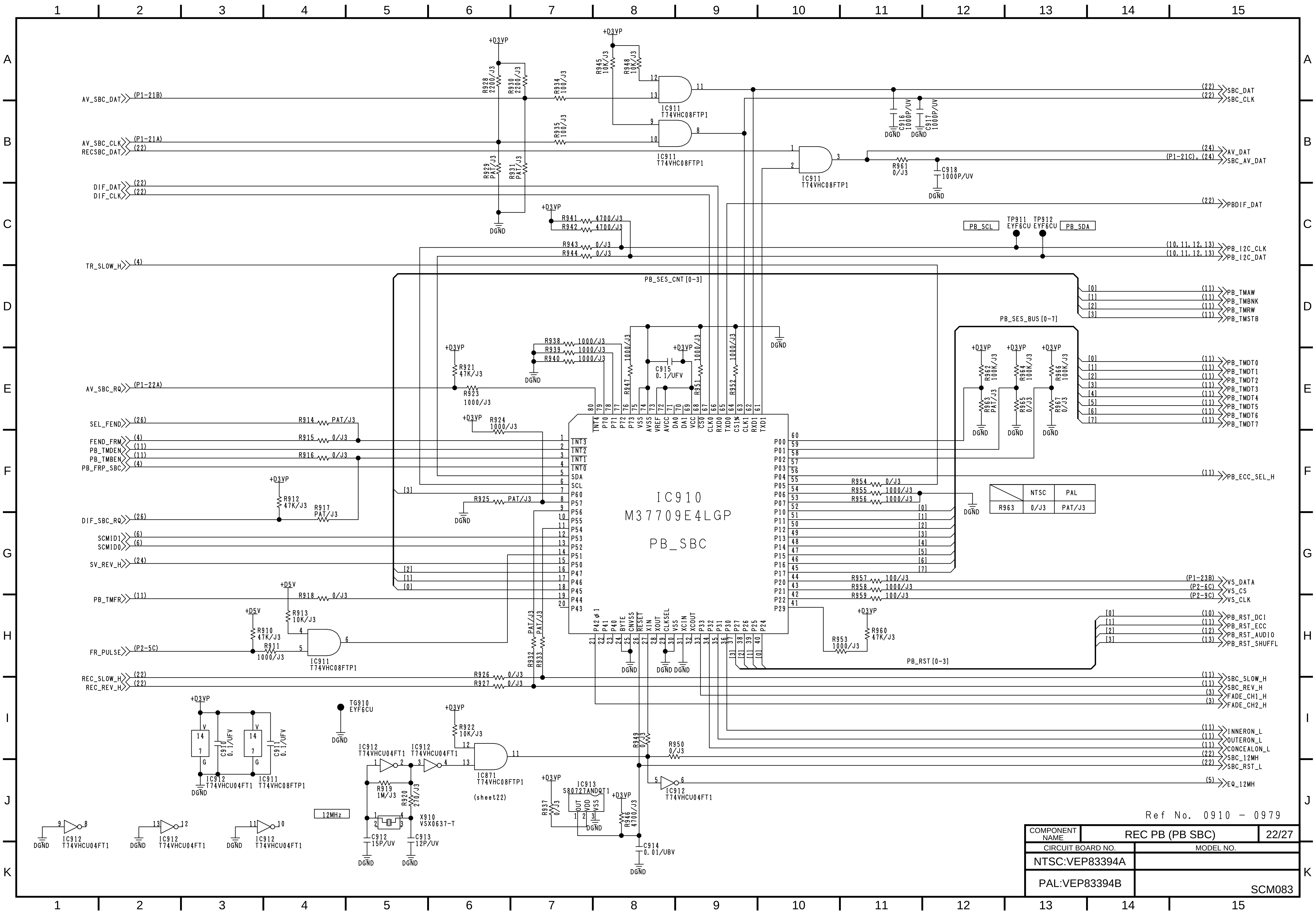
COMPONENT NAME	REC PB (VIDEO DATA)	20/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM081	


IC870
M37709E4LGP
REC_SBC
IC871
T74VHC08FTP1
+D3VR
DGND
R876 2200/J3
R877 2200/J3
R878 100/J3
R879 100/J3
R883 10K/J3
R886 10K/J3
R887 4700/J3
R888 4700/J3
R889 1000/J3
R890 1000/J3
R891 1000/J3
R892 1000/J3
R893 1000/J3
R894 1000/J3
R871 1000/J3
R872 PAT/J3
R873 0/J3
R874 0/J3
R875 PAT/J3
R870 47K/J3
R880 1000/J3
R881 PAT/J3
R882 1000/J3
R895 1000/J3
R896 1000/J3
R897 100K/J3
R898 PAT/J3
R899 100K/J3
R900 0/J3
R901 100K/J3
R902 PAT/J3
C870 0.01/UBV
C871 0.1/UFV
C872 0.1/UFV
REC_SCL
REC_SDA
EYF6CU TP870
EYF6CU TP871
(sheet23)
REC_SES_CNT[0-4]
REC_SES_BUS[0-7]
REC_RST[0-3]
DIF_SBC_DAT (26)
DIF_SBC_CLK (26)
PBDIF_DAT (23)
SBC_DAT (23)
SBC_CLK (23)
TR_SLOW_H (4)
AV_SBC_RQ (P1-22A)
SEL_FEND (26)
FEND_FRM (4)
REC_TMDEN (8)
REC_TMBEN (8)
REC_FRP_SBC (4)
DIF_SBC_RQ (26)
SCMID1 (6)
SCMID0 (6)
SV_REV_H (24)
REC_TMFR (8)
SBC_RST_L (23)
SBC_12MH (23)
(23) DIF_DAT
(23) DIF_CLK
(26) SBC_DIF_DAT
(23) RECSBC_DAT
(6,7,8,9) REC_I2C_CLK
(6,7,8,9) REC_I2C_DAT
(8) REC_TMAW
(8) REC_TMBNK
(8) REC_TMRW
(8) REC_TMSTB
(8,9) DREC_H
(8) REC_TMDT0
(8) REC_TMDT1
(8) REC_TMDT2
(8) REC_TMDT3
(8) REC_TMDT4
(8) REC_TMDT5
(8) REC_TMDT6
(8) REC_TMDT7
(8) REC_ECC_SEL_H
(23) REC_SLOW_H
(23) REC_REV_H
(9) REC_RST_DCI
(8) REC_RST_ECC
(7) REC_RST_AUDIO
(6) REC_RST_SHUFFL
(20,24) REC_L
INT3 INT2 INT1 INT0 SDA SCL P60 P57 P56 P55 P54 P53 P52 P51 P50 P47 P46 P45 P44 P43
INT4 P70 P71 P72 P73 VSS AVSS VREF AVCC DA1 DA0 VCC CS0 CLK0 RXD0 TXD0 CS1 CLK1 RXD1 TXD1
P00 P01 P02 P03 P04 P05 P06 P07 P10 P11 P12 P13 P14 P15 P16 P17 P20 P21 P22 P29
P42φ1 P41 P40 BYTE CNVSS RESET XIN XOUT CLKSEL VSS XCIN XCOUT P33 P32 P31 P30 P27 P26 P25 P24

	NTSC	PAL
R898	0/J3	PAT/J3

Ref No. 0870 - 0909

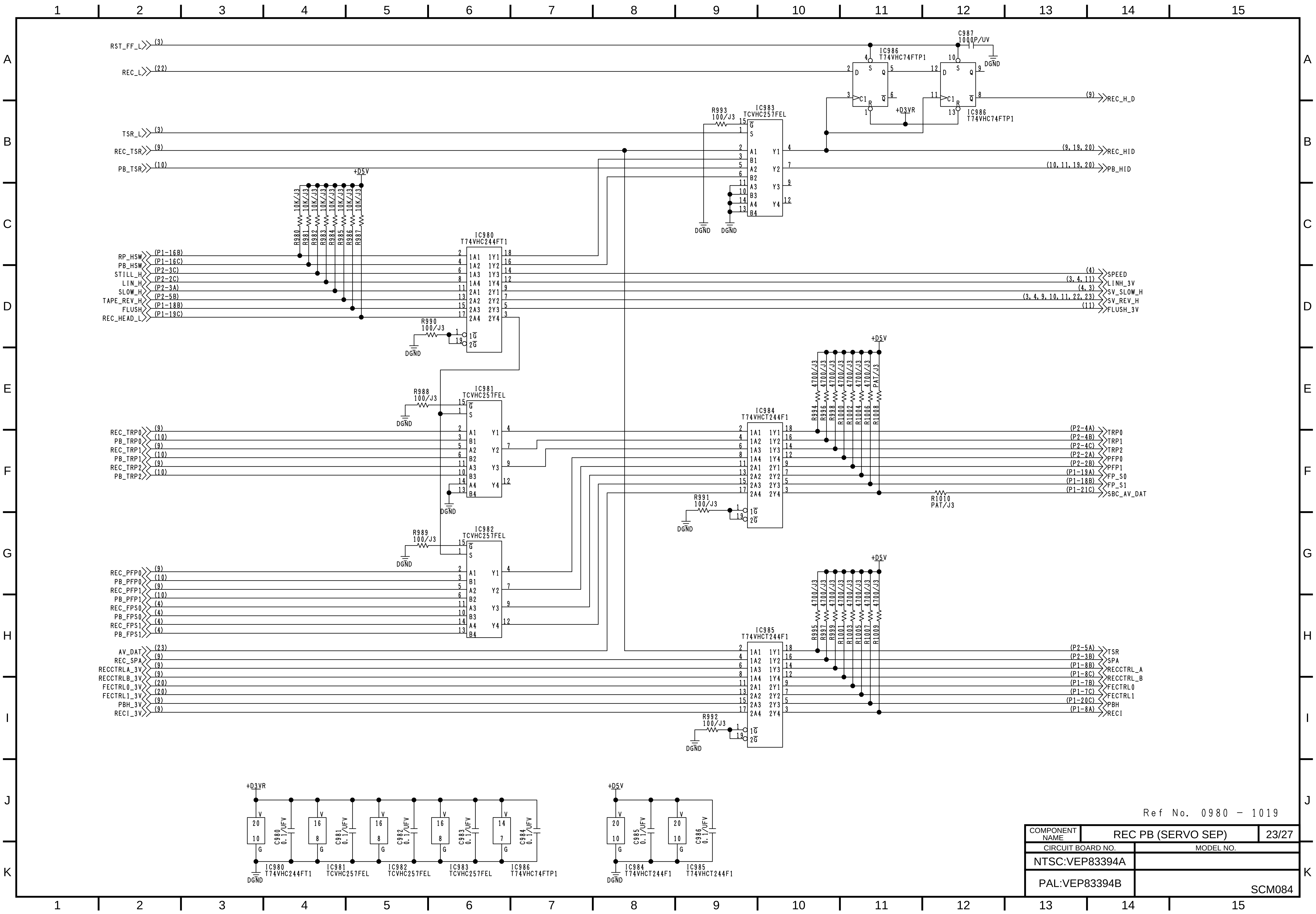
COMPONENT NAME	REC PB (REC SBC)	21/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM082	


IC910
M37709E4LGP
PB_SBC
AV_SBC_DAT
AV_SBC_CLK
RECSBC_DAT
DIF_DAT
DIF_CLK
TR_SLOW_H
AV_SBC_RQ
SEL_FEND
FEND_FRM
PB_TMDEN
PB_TMBEN
PB_FRP_SBC
DIF_SBC_RQ
SCMID1
SCMID0
SV_REV_H
PB_TMFR
FR_PULSE
REC_SLOW_H
REC_REV_H
SBC_DAT
SBC_CLK
AV_DAT
SBC_AV_DAT
PBDIF_DAT
PB_I2C_CLK
PB_I2C_DAT
PB_SES_CNT[0-3]
PB_TMAW
PB_TMBNK
PB_TMRW
PB_TMSTB
PB_SES_BUS[0-7]
PB_TMDT0
PB_TMDT1
PB_TMDT2
PB_TMDT3
PB_TMDT4
PB_TMDT5
PB_TMDT6
PB_TMDT7
PB_ECC_SEL_H
VS_DATA
VS_CS
VS_CLK
PB_RST_DCI
PB_RST_ECC
PB_RST_AUDIO
PB_RST_SHUFFL
PB_RST[0-3]
SBC_SLOW_H
SBC_REV_H
FADE_CH1_H
FADE_CH2_H
INNERON_L
OUTERON_L
CONCEALON_L
SBC_12MH
SBC_RST_L
EQ_12MH
IC911 T74VHC08FTP1
IC912 T74VHCU04FT1
IC871 T74VHC08FTP1
(sheet22)
IC913 S80727ANDQT1
X910 VSX0637-T
12MHz
TP911 EYF6CU
TP912 EYF6CU
TG910 EYF6CU
PB_SCL
PB_SDA
+D3VP
+D5V
DGND
R928 2200/J3
R930 2200/J3
R934 100/J3
R935 100/J3
R929 PAT/J3
R931 PAT/J3
R945 10K/J3
R948 10K/J3
C916 1000P/UV
C917 1000P/UV
R961 0/J3
C918 1000P/UV
R941 4700/J3
R942 4700/J3
R943 0/J3
R944 0/J3
R938 1000/J3
R939 1000/J3
R940 1000/J3
R947 1000/J3
C915 0.1/UFV
R951 1000/J3
R952 1000/J3
R921 47K/J3
R923 1000/J3
R924 1000/J3
R914 PAT/J3
R915 0/J3
R916 0/J3
R912 47K/J3
R917 PAT/J3
R925 PAT/J3
R918 0/J3
R913 10K/J3
R910 47K/J3
R911 1000/J3
R932 PAT/J3
R933 PAT/J3
R926 0/J3
R927 0/J3
R962 100K/J3
R963 PAT/J3
R964 100K/J3
R965 0/J3
R966 100K/J3
R967 0/J3
R954 0/J3
R955 1000/J3
R956 1000/J3
R957 100/J3
R958 1000/J3
R959 100/J3
R953 1000/J3
R960 47K/J3
R922 10K/J3
R919 1M/J3
R920 270/J3
C912 15P/UV
C913 12P/UV
C910 0.1/UFV
C911 0.1/UFV
R949 0/J3
R950 0/J3
R937 0/J3
R946 4700/J3
C914 0.01/UBV

	NTSC	PAL
R963	0/J3	PAT/J3

Ref No. 0910 - 0979

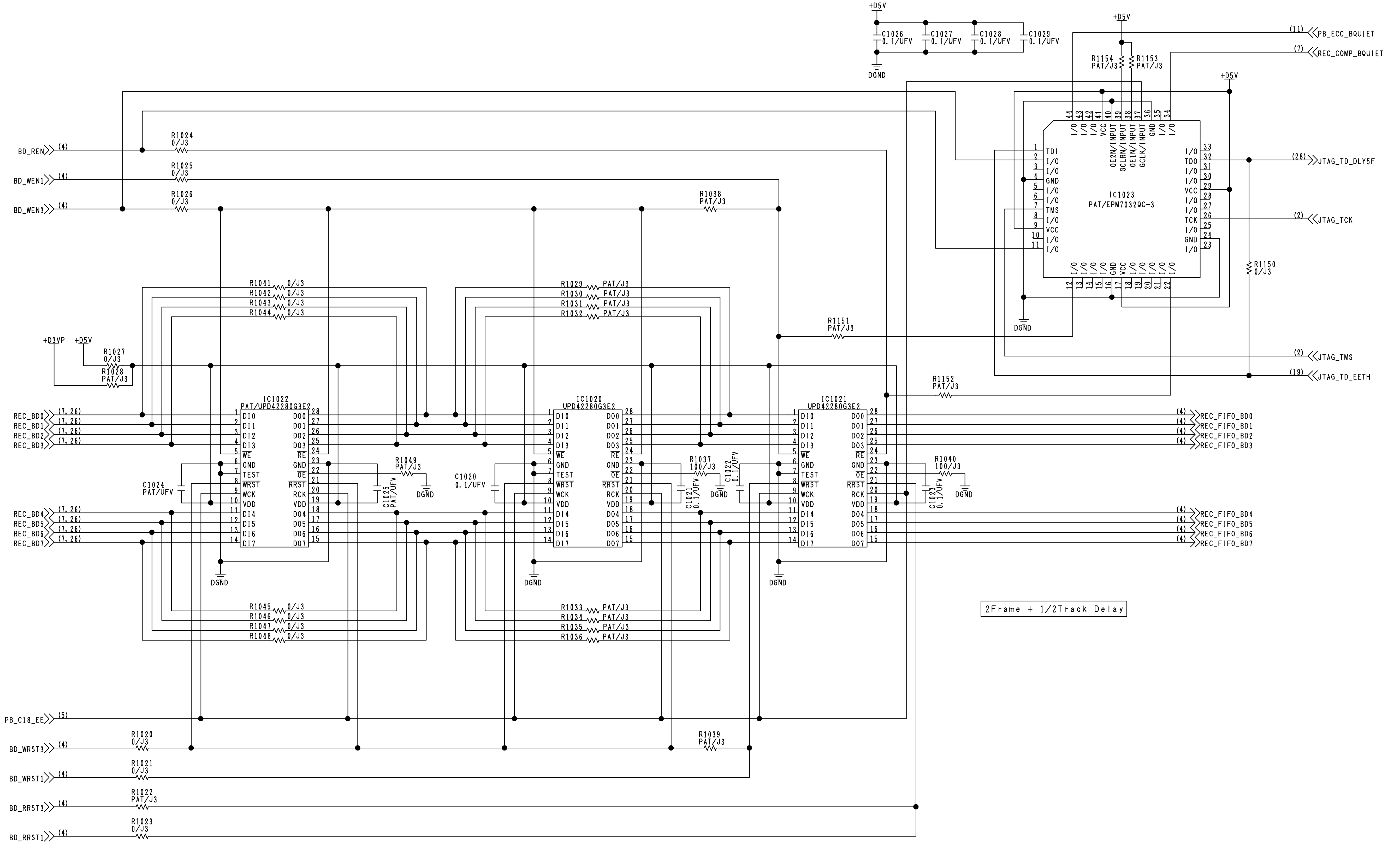
COMPONENT NAME	REC PB (PB SBC)	22/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM083	



RST_FF_L (3)
REC_L (22)
TSR_L (3)
REC_TSR (9)
PB_TSR (10)
C987 1000P/UV
IC986 T74VHC74FTP1
DGND
REC_H_D (9)
+D3VR
R993 100/J3
IC983 TCVHC257FEL
REC_HID (9,19,20)
PB_HID (10,11,19,20)
+D5V
R980 R981 R982 R983 R984 R985 R986 R987 10K/J3
IC980 T74VHC244FT1
RP_HSW (P1-16B)
PB_HSW (P1-16C)
STILL_H (P2-3C)
LIN_H (P2-2C)
SLOW_H (P2-3A)
TAPE_REV_H (P2-5B)
FLUSH (P1-18B)
REC_HEAD_L (P1-19C)
SPEED (4)
LINH_3V (3,4,11)
SV_SLOW_H (4,3)
SV_REV_H (3,4,9,10,11,22,23)
FLUSH_3V (11)
R990 100/J3
R988 100/J3
IC981 TCVHC257FEL
REC_TRP0 (9)
PB_TRP0 (10)
REC_TRP1 (9)
PB_TRP1 (10)
REC_TRP2 (9)
PB_TRP2 (10)
R994 R996 R998 R1000 R1002 R1004 R1006 4700/J3
R1008 PAT/J3
IC984 T74VHCT244F1
TRP0 (P2-4A)
TRP1 (P2-4B)
TRP2 (P2-4C)
PFP0 (P2-2A)
PFP1 (P2-2B)
FP_S0 (P1-19A)
FP_S1 (P1-18B)
SBC_AV_DAT (P1-21C)
R1010 PAT/J3
R991 100/J3
R989 100/J3
IC982 TCVHC257FEL
REC_PFP0 (9)
PB_PFP0 (10)
REC_PFP1 (9)
PB_PFP1 (10)
REC_FPS0 (4)
PB_FPS0 (4)
REC_FPS1 (4)
PB_FPS1 (4)
R995 R997 R999 R1001 R1003 R1005 R1007 R1009 4700/J3
IC985 T74VHCT244F1
AV_DAT (23)
REC_SPA (9)
RECCTRLA_3V (9)
RECCTRLB_3V (9)
FECTRL0_3V (20)
FECTRL1_3V (20)
PBH_3V (9)
RECI_3V (9)
TSR (P2-5A)
SPA (P2-3B)
RECCTRL_A (P1-8B)
RECCTRL_B (P1-8C)
FECTRL0 (P1-7B)
FECTRL1 (P1-7C)
PBH (P1-20C)
RECI (P1-8A)
R992 100/J3
C980 C981 C982 C983 C984 0.1/UFV
IC980 T74VHC244FT1
IC981 TCVHC257FEL
IC982 TCVHC257FEL
IC983 TCVHC257FEL
IC986 T74VHC74FTP1
C985 C986 0.1/UFV
IC984 T74VHCT244F1
IC985 T74VHCT244F1

Ref No. 0980 − 1019

COMPONENT NAME	REC PB (SERVO SEP)	23/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM084	


+D5V
C1026 0.1/UFV
C1027 0.1/UFV
C1028 0.1/UFV
C1029 0.1/UFV
DGND
R1154 PAT/J3
R1153 PAT/J3
(11) PB_ECC_BQUIET
(7) REC_COMP_BQUIET
IC1023
PAT/EPM7032QC-3
TDI
TDO
TMS
TCK
VCC
GND
I/O
OE2N/INPUT
GCLRN/INPUT
OE1N/INPUT
GCLK/INPUT
(28) JTAG_TD_DLY5F
(2) JTAG_TCK
R1150 0/J3
(2) JTAG_TMS
(19) JTAG_TD_EETH
BD_REN (4)
BD_WEN1 (4)
BD_WEN3 (4)
R1024 0/J3
R1025 0/J3
R1026 0/J3
R1038 PAT/J3
R1041 0/J3
R1042 0/J3
R1043 0/J3
R1044 0/J3
R1029 PAT/J3
R1030 PAT/J3
R1031 PAT/J3
R1032 PAT/J3
R1151 PAT/J3
+D3VP
+D5V
R1027 0/J3
R1028 PAT/J3
R1152 PAT/J3
IC1022
PAT/UPD42280G3E2
IC1020
UPD42280G3E2
IC1021
UPD42280G3E2
DI0
DI1
DI2
DI3
WE
GND
TEST
WRST
WCK
VDD
DI4
DI5
DI6
DI7
DO0
DO1
DO2
DO3
RE
OE
RRST
RCK
DO4
DO5
DO6
DO7
REC_BD0 (7,26)
REC_BD1 (7,26)
REC_BD2 (7,26)
REC_BD3 (7,26)
REC_BD4 (7,26)
REC_BD5 (7,26)
REC_BD6 (7,26)
REC_BD7 (7,26)
C1024 PAT/UFV
R1049 PAT/J3
C1025 PAT/UFV
C1020 0.1/UFV
R1037 100/J3
C1021 0.1/UFV
C1022 0.1/UFV
R1040 100/J3
C1023 0.1/UFV
(4) REC_FIFO_BD0
(4) REC_FIFO_BD1
(4) REC_FIFO_BD2
(4) REC_FIFO_BD3
(4) REC_FIFO_BD4
(4) REC_FIFO_BD5
(4) REC_FIFO_BD6
(4) REC_FIFO_BD7
R1045 0/J3
R1046 0/J3
R1047 0/J3
R1048 0/J3
R1033 PAT/J3
R1034 PAT/J3
R1035 PAT/J3
R1036 PAT/J3
2Frame + 1/2Track Delay
PB_C18_EE (5)
BD_WRST3 (4)
BD_WRST1 (4)
BD_RRST3 (4)
BD_RRST1 (4)
R1020 0/J3
R1021 0/J3
R1022 PAT/J3
R1023 0/J3
R1039 PAT/J3

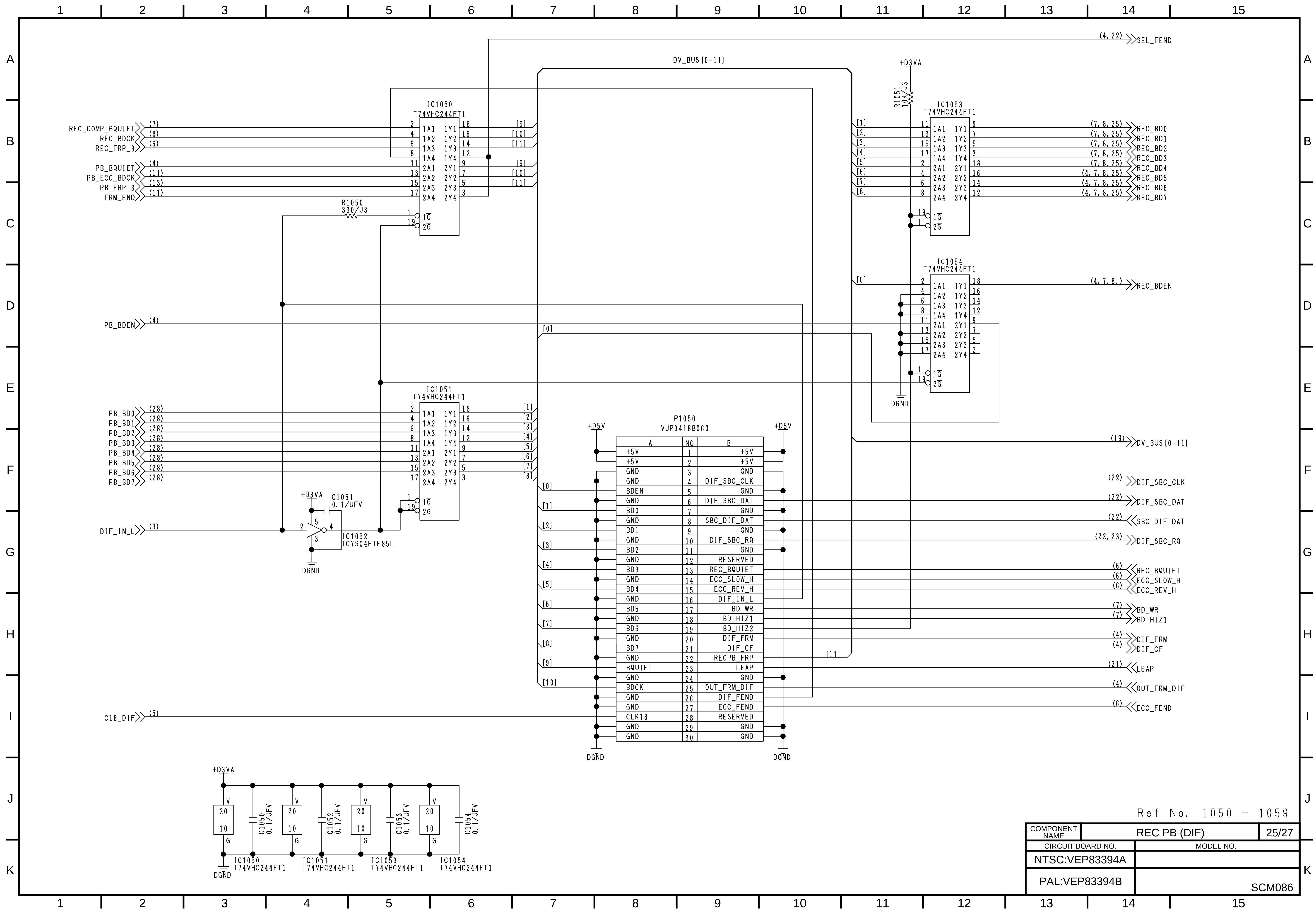
	NTSC	PAL
C1020	PAT/UFV	0.1/UFV
C1021	PAT/UFV	0.1/UFV

	NTSC	PAL
R1029	0/J3	PAT/J3
R1030	0/J3	PAT/J3
R1031	0/J3	PAT/J3
R1032	0/J3	PAT/J3
R1033	0/J3	PAT/J3
R1034	0/J3	PAT/J3
R1035	0/J3	PAT/J3
R1036	0/J3	PAT/J3
R1037	PAT/J3	100/J3

	NTSC	PAL
IC1020	PAT	UPD42280G3E2

Ref No. 1020 – 1049, 1150 –

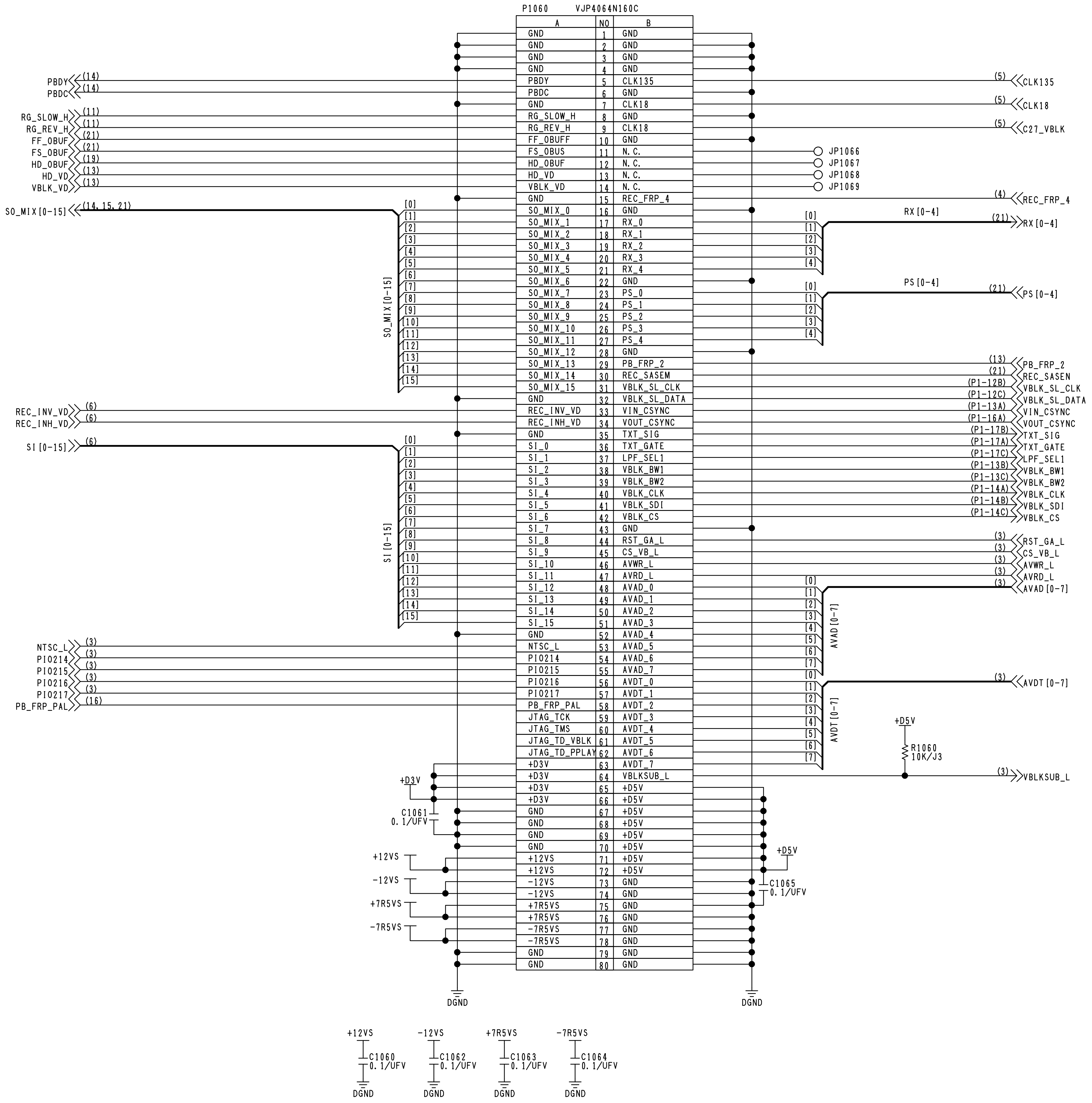
COMPONENT NAME	REC PB (DVC RETURN)	24/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM085	


SEL_FEND
DV_BUS[0-11]
+D3VA
R1051
10K/J3
IC1050
T74VHC244FT1
IC1053
T74VHC244FT1
REC_COMP_BQUIET
REC_BDCK
REC_FRP_3
PB_BQUIET
PB_ECC_BDCK
PB_FRP_3
FRM_END
R1050
330/J3
REC_BD0
REC_BD1
REC_BD2
REC_BD3
REC_BD4
REC_BD5
REC_BD6
REC_BD7
IC1054
T74VHC244FT1
REC_BDEN
PB_BDEN
DGND
IC1051
T74VHC244FT1
PB_BD0
PB_BD1
PB_BD2
PB_BD3
PB_BD4
PB_BD5
PB_BD6
PB_BD7
P1050
VJP3418B060
+D5V
DIF_IN_L
C1051
0.1/UFV
IC1052
TC7S04FTE85L
DV_BUS[0-11]
DIF_SBC_CLK
DIF_SBC_DAT
SBC_DIF_DAT
DIF_SBC_RQ
REC_BQUIET
ECC_SLOW_H
ECC_REV_H
BD_WR
BD_HIZ1
DIF_FRM
DIF_CF
LEAP
OUT_FRM_DIF
ECC_FEND
C18_DIF
C1050
C1052
C1053
C1054
0.1/UFV
IC1050
IC1051
IC1053
IC1054
T74VHC244FT1

A	NO	B
+5V	1	+5V
+5V	2	+5V
GND	3	GND
GND	4	DIF_SBC_CLK
BDEN	5	GND
GND	6	DIF_SBC_DAT
BD0	7	GND
GND	8	SBC_DIF_DAT
BD1	9	GND
GND	10	DIF_SBC_RQ
BD2	11	GND
GND	12	RESERVED
BD3	13	REC_BQUIET
GND	14	ECC_SLOW_H
BD4	15	ECC_REV_H
GND	16	DIF_IN_L
BD5	17	BD_WR
GND	18	BD_HIZ1
BD6	19	BD_HIZ2
GND	20	DIF_FRM
BD7	21	DIF_CF
GND	22	RECPB_FRP
BQUIET	23	LEAP
GND	24	GND
BDCK	25	OUT_FRM_DIF
GND	26	DIF_FEND
GND	27	ECC_FEND
CLK18	28	RESERVED
GND	29	GND
GND	30	GND

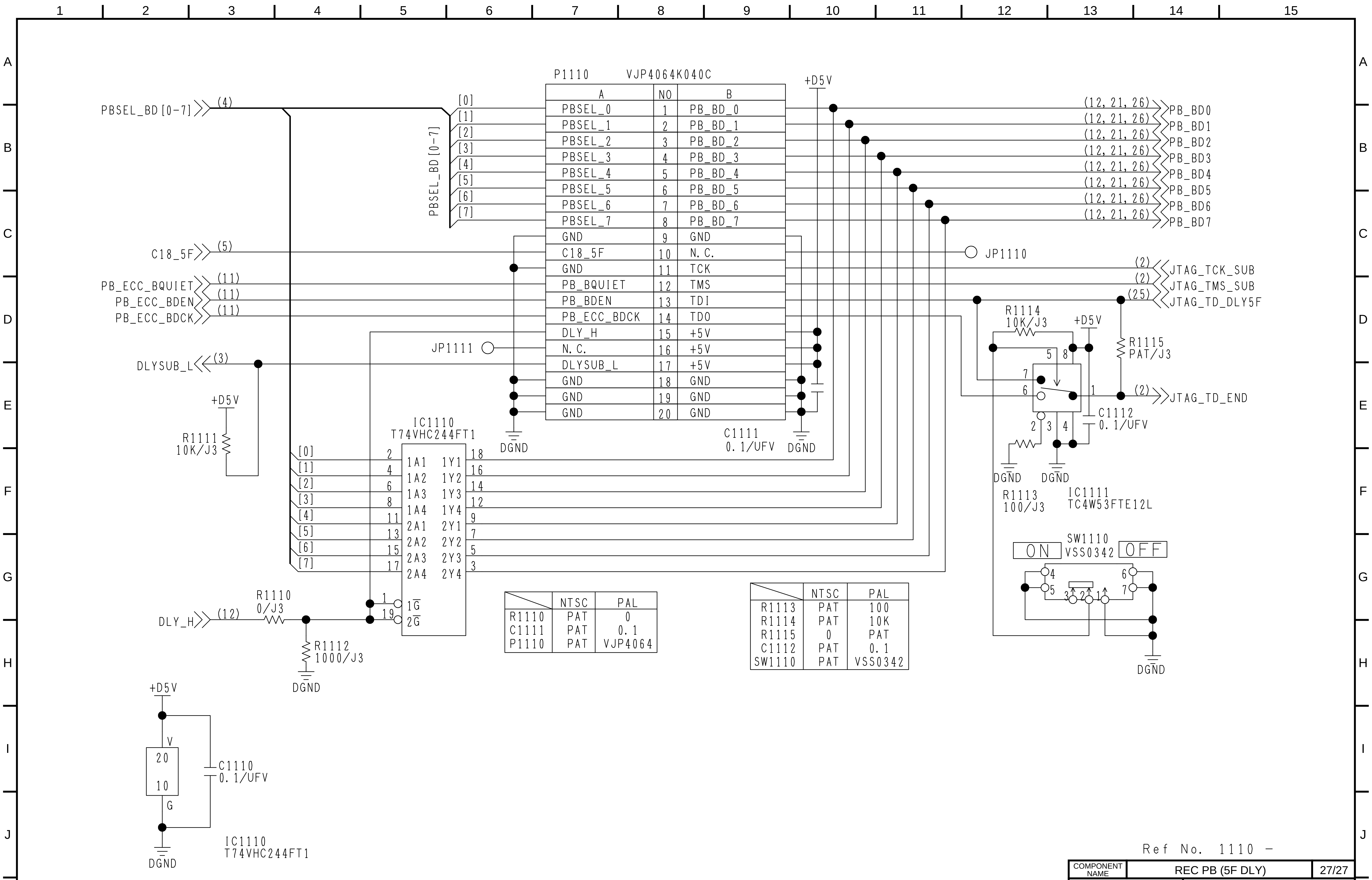
Ref No. 1050 - 1059

COMPONENT NAME	REC PB (DIF)	25/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM086	


P1060 VJP4064N160C
A
NO
B
1 GND GND
2 GND GND
3 GND GND
4 GND GND
5 PBDY CLK135
6 PBDC GND
7 GND CLK18
8 RG_SLOW_H GND
9 RG_REV_H CLK18
10 FF_OBUFF GND
11 FS_OBUS N.C.
12 HD_OBUF N.C.
13 HD_VD N.C.
14 VBLK_VD N.C.
15 GND REC_FRP_4
16 SO_MIX_0 GND
17 SO_MIX_1 RX_0
18 SO_MIX_2 RX_1
19 SO_MIX_3 RX_2
20 SO_MIX_4 RX_3
21 SO_MIX_5 RX_4
22 SO_MIX_6 GND
23 SO_MIX_7 PS_0
24 SO_MIX_8 PS_1
25 SO_MIX_9 PS_2
26 SO_MIX_10 PS_3
27 SO_MIX_11 PS_4
28 SO_MIX_12 GND
29 SO_MIX_13 PB_FRP_2
30 SO_MIX_14 REC_SASEM
31 SO_MIX_15 VBLK_SL_CLK
32 GND VBLK_SL_DATA
33 REC_INV_VD VIN_CSYNC
34 REC_INH_VD VOUT_CSYNC
35 GND TXT_SIG
36 SI_0 TXT_GATE
37 SI_1 LPF_SEL1
38 SI_2 VBLK_BW1
39 SI_3 VBLK_BW2
40 SI_4 VBLK_CLK
41 SI_5 VBLK_SDI
42 SI_6 VBLK_CS
43 SI_7 GND
44 SI_8 RST_GA_L
45 SI_9 CS_VB_L
46 SI_10 AVWR_L
47 SI_11 AVRD_L
48 SI_12 AVAD_0
49 SI_13 AVAD_1
50 SI_14 AVAD_2
51 SI_15 AVAD_3
52 GND AVAD_4
53 NTSC_L AVAD_5
54 PIO214 AVAD_6
55 PIO215 AVAD_7
56 PIO216 AVDT_0
57 PIO217 AVDT_1
58 PB_FRP_PAL AVDT_2
59 JTAG_TCK AVDT_3
60 JTAG_TMS AVDT_4
61 JTAG_TD_VBLK AVDT_5
62 JTAG_TD_PPLAY AVDT_6
63 +D3V AVDT_7
64 +D3V VBLKSUB_L
65 +D3V +D5V
66 +D3V +D5V
67 GND +D5V
68 GND +D5V
69 GND +D5V
70 GND +D5V
71 +12VS +D5V
72 +12VS +D5V
73 -12VS GND
74 -12VS GND
75 +7R5VS GND
76 +7R5VS GND
77 -7R5VS GND
78 -7R5VS GND
79 GND GND
80 GND GND
PBDY (14)
PBDC (14)
RG_SLOW_H (11)
RG_REV_H (11)
FF_OBUF (21)
FS_OBUF (21)
HD_OBUF (19)
HD_VD (13)
VBLK_VD (13)
SO_MIX[0-15] (14, 15, 21)
SO_MIX[0-15]
[0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15]
REC_INV_VD (6)
REC_INH_VD (6)
SI[0-15] (6)
SI[0-15]
NTSC_L (3)
PIO214 (3)
PIO215 (3)
PIO216 (3)
PIO217 (3)
PB_FRP_PAL (16)
(5) CLK135
(5) CLK18
(5) C27_VBLK
JP1066
JP1067
JP1068
JP1069
(4) REC_FRP_4
RX[0-4]
(21) RX[0-4]
PS[0-4]
(21) PS[0-4]
(13) PB_FRP_2
(21) REC_SASEN
(P1-12B) VBLK_SL_CLK
(P1-12C) VBLK_SL_DATA
(P1-13A) VIN_CSYNC
(P1-16A) VOUT_CSYNC
(P1-17B) TXT_SIG
(P1-17A) TXT_GATE
(P1-17C) LPF_SEL1
(P1-13B) VBLK_BW1
(P1-13C) VBLK_BW2
(P1-14A) VBLK_CLK
(P1-14B) VBLK_SDI
(P1-14C) VBLK_CS
(3) RST_GA_L
(3) CS_VB_L
(3) AVWR_L
(3) AVRD_L
(3) AVAD[0-7]
AVAD[0-7]
(3) AVDT[0-7]
AVDT[0-7]
+D5V
R1060
10K/J3
(3) VBLKSUB_L
+D3V
C1061
0.1/UFV
+12VS
-12VS
+7R5VS
-7R5VS
+D5V
C1065
0.1/UFV
DGND
DGND
+12VS
C1060
0.1/UFV
-12VS
C1062
0.1/UFV
+7R5VS
C1063
0.1/UFV
-7R5VS
C1064
0.1/UFV
DGND
DGND
DGND
DGND

Ref No. 1060 - 1109

COMPONENT NAME	REC PB (V BLK SUB)	26/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM087	



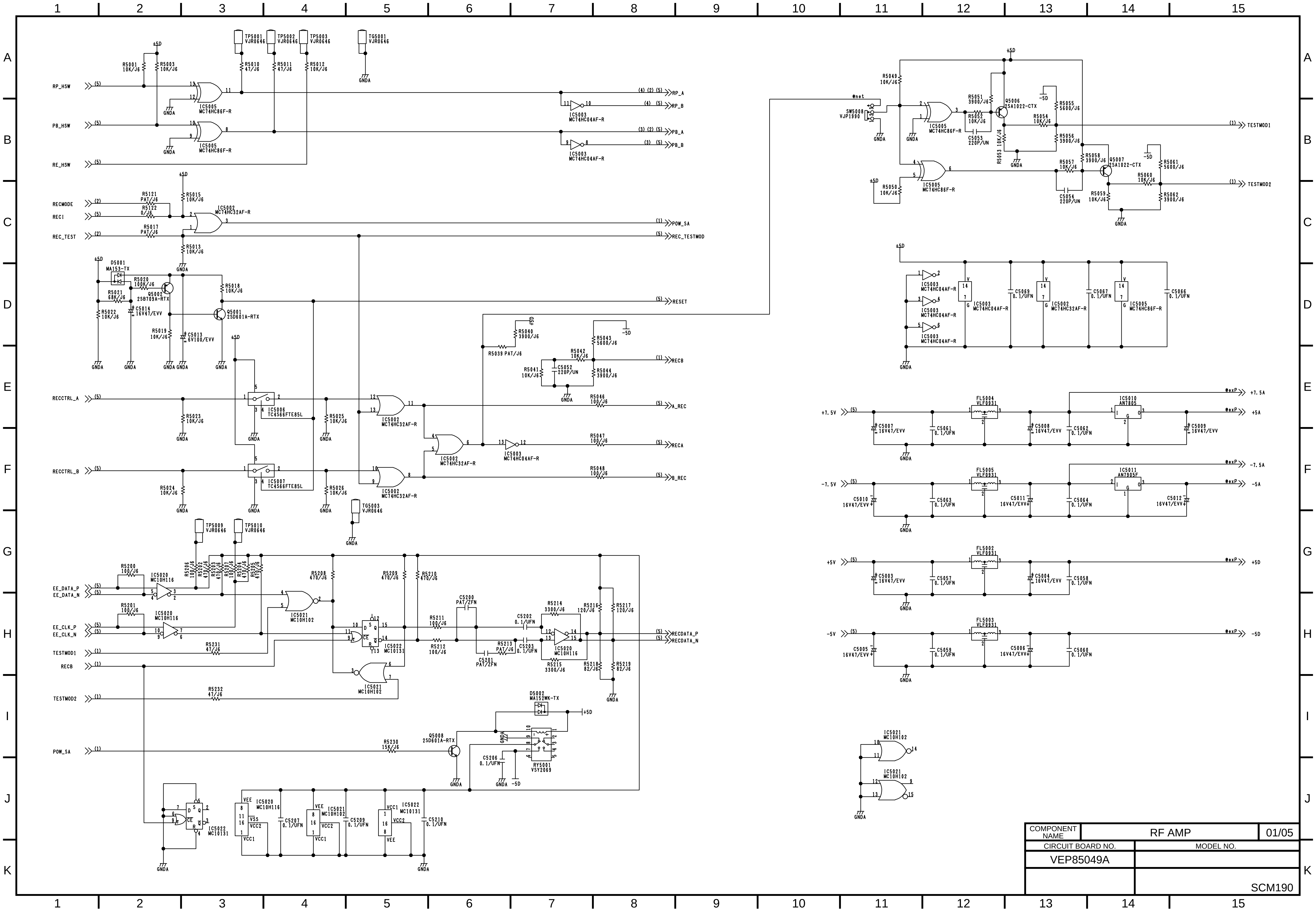
P1110 VJP4064K040C
A
NO
B
PBSEL_BD[0-7]
(4)
PBSEL_BD[0-7]
[0]
[1]
[2]
[3]
[4]
[5]
[6]
[7]
PBSEL_0 1 PB_BD_0
PBSEL_1 2 PB_BD_1
PBSEL_2 3 PB_BD_2
PBSEL_3 4 PB_BD_3
PBSEL_4 5 PB_BD_4
PBSEL_5 6 PB_BD_5
PBSEL_6 7 PB_BD_6
PBSEL_7 8 PB_BD_7
GND 9 GND
C18_5F 10 N.C.
GND 11 TCK
PB_BQUIET 12 TMS
PB_BDEN 13 TDI
PB_ECC_BDCK 14 TDO
DLY_H 15 +5V
N.C. 16 +5V
DLYSUB_L 17 +5V
GND 18 GND
GND 19 GND
GND 20 GND
+D5V
(12, 21, 26) PB_BD0
(12, 21, 26) PB_BD1
(12, 21, 26) PB_BD2
(12, 21, 26) PB_BD3
(12, 21, 26) PB_BD4
(12, 21, 26) PB_BD5
(12, 21, 26) PB_BD6
(12, 21, 26) PB_BD7
C18_5F (5)
PB_ECC_BQUIET (11)
PB_ECC_BDEN (11)
PB_ECC_BDCK (11)
DLYSUB_L (3)
JP1110
JP1111
(2) JTAG_TCK_SUB
(2) JTAG_TMS_SUB
(25) JTAG_TD_DLY5F
(2) JTAG_TD_END
R1114 10K/J3
R1115 PAT/J3
C1112 0.1/UFV
R1113 100/J3
IC1111 TC4W53FTE12L
5 8 7 6 1 2 3 4
+D5V
R1111 10K/J3
DGND
C1111 0.1/UFV
IC1110 T74VHC244FT1
2 1A1 1Y1 18
4 1A2 1Y2 16
6 1A3 1Y3 14
8 1A4 1Y4 12
11 2A1 2Y1 9
13 2A2 2Y2 7
15 2A3 2Y3 5
17 2A4 2Y4 3
1 1G
19 2G
DLY_H (12)
R1110 0/J3
R1112 1000/J3
SW1110 VSS0342
ON
OFF
4 6 5 7 3 2 1
+D5V
V
20
10
G
C1110 0.1/UFV
IC1110 T74VHC244FT1
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K

	NTSC	PAL
R1110	PAT	0
C1111	PAT	0.1
P1110	PAT	VJP4064

	NTSC	PAL
R1113	PAT	100
R1114	PAT	10K
R1115	0	PAT
C1112	PAT	0.1
SW1110	PAT	VSS0342

Ref No. 1110 –

COMPONENT NAME	REC PB (5F DLY)	27/27
CIRCUIT BOARD NO.	MODEL NO.	
NTSC:VEP83394A		
PAL:VEP83394B	SCM088	


1
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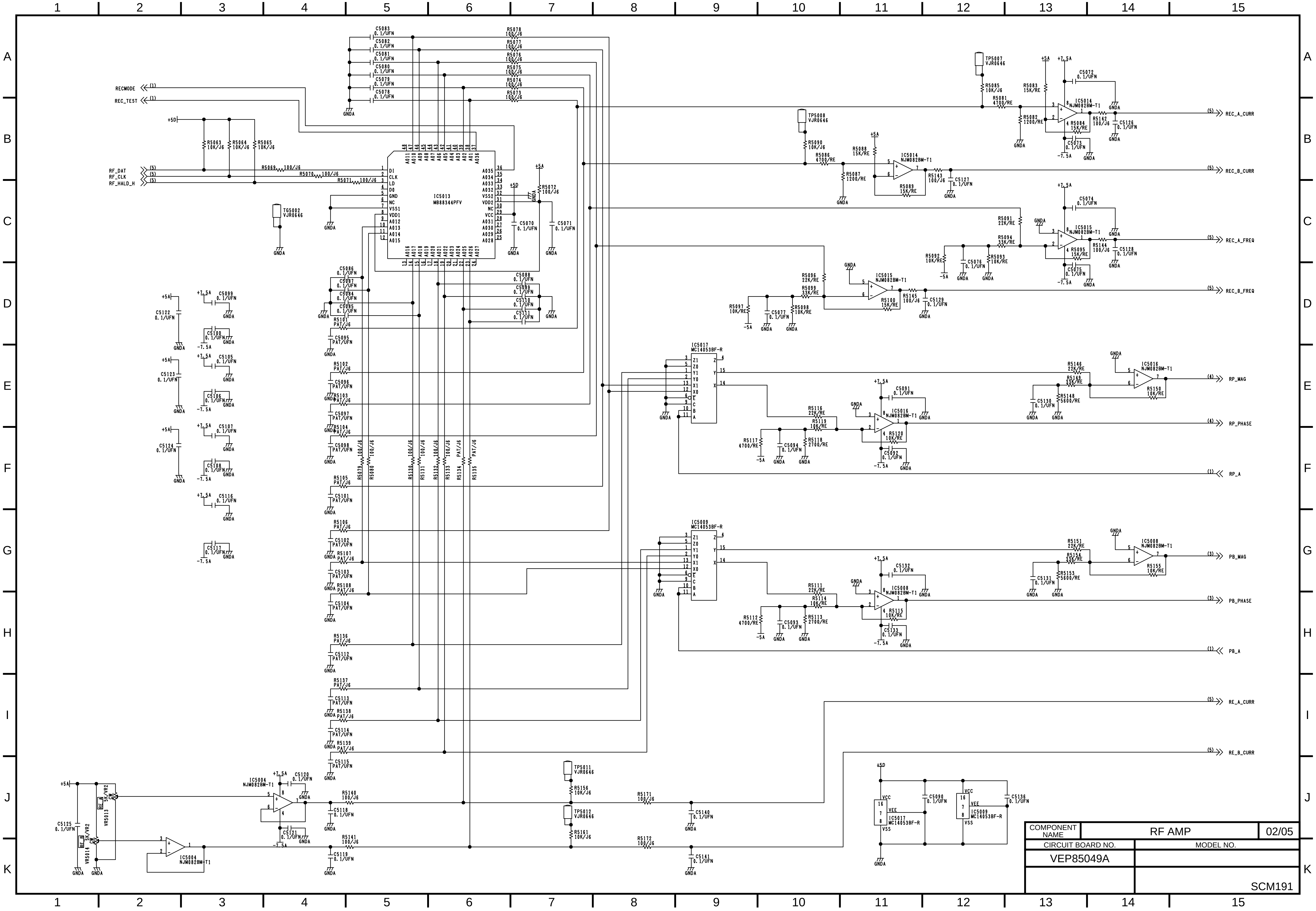
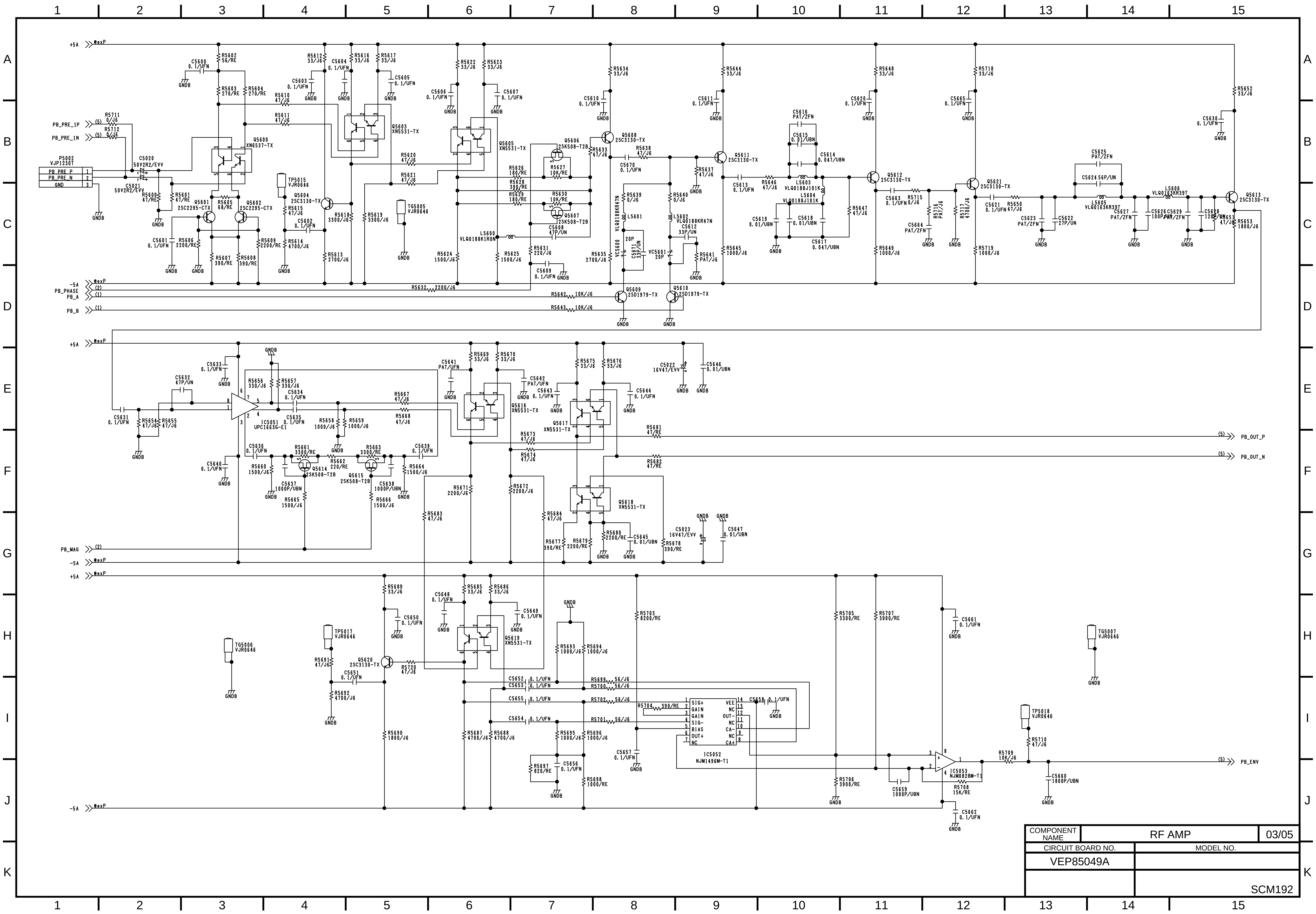
A
B
C
D
E
F
G
H
I
J
K
RP_HSW
PB_HSW
RE_HSW
RECMODE
RECI
REC_TEST
RECCTRL_A
RECCTRL_B
EE_DATA_P
EE_DATA_N
EE_CLK_P
EE_CLK_N
TESTMOD1
RECB
TESTMOD2
POW_SA
+5D
-5D
GNDA
TP5001 VJR0646
TP5002 VJR0646
TP5003 VJR0646
TG5001 VJR0646
R5001 10K/J6
R5003 10K/J6
R5010 47/J6
R5011 47/J6
R5012 10K/J6
IC5005 MC74HC86F-R
IC5003 MC74HC04AF-R
(4) (2) (5) RP_A
(4) (5) RP_B
(3) (2) (5) PB_A
(3) (5) PB_B
R5121 PAT/J6
R5122 0/J6
R5017 PAT/J6
R5015 10K/J6
R5013 10K/J6
IC5002 MC74HC32AF-R
(1) POW_SA
(5) REC_TESTMOD
D5001 MA153-TX
R5020 100K/J6
R5021 68K/J6
R5022 10K/J6
Q5002 2SB709A-RTX
C5014 16V47/EVV
R5019 10K/J6
C5013 6V100/EVV
R5018 10K/J6
Q5001 2SD601A-RTX
(5) RESET
R5040 3900/J6
R5039 PAT/J6
R5043 5600/J6
R5042 10K/J6
R5041 10K/J6
C5052 220P/UN
R5044 3900/J6
(1) RECB
R5046 100/J6
(5) A_REC
R5047 100/J6
(5) RECA
R5048 100/J6
(5) B_REC
IC5006 TC4S66FTE85L
IC5007 TC4S66FTE85L
R5023 10K/J6
R5024 10K/J6
R5025 10K/J6
R5026 10K/J6
TG5003 VJR0646
TP5009 VJR0646
TP5010 VJR0646
R5200 100/J6
R5201 100/J6
IC5020 MC10H116
R5206 100/J6
R5202 470/J6
R5203 470/J6
R5207 100/J6
R5204 470/J6
R5205 470/J6
R5208 470/J6
R5209 470/J6
R5210 470/J6
IC5021 MC10H102
IC5022 MC10131
R5231 47/J6
R5232 47/J6
C5200 PAT/ZFN
C5201 PAT/ZFN
R5211 100/J6
R5212 100/J6
R5213 PAT/J6
C5202 0.1/UFN
C5203 0.1/UFN
R5214 3300/J6
R5215 3300/J6
R5216 120/J6
R5217 120/J6
R5218 82/J6
R5219 82/J6
(5) RECDATA_P
(5) RECDATA_N
D5002 MA152WK-TX
R5230 15K/J6
Q5008 2SD601A-RTX
C5206 0.1/UFN
RY5001 VSY2069
VEE
VSS
VCC1
VCC2
C5207 0.1/UFN
C5209 0.1/UFN
C5210 0.1/UFN
@net
SW5008 VJP1990
R5049 10K/J6
R5050 10K/J6
R5051 3900/J6
R5052 10K/J6
C5053 220P/UN
R5053 10K/J6
Q5006 2SA1022-CTX
R5055 5600/J6
R5054 10K/J6
R5056 3900/J6
(1) TESTMOD1
R5057 10K/J6
C5054 220P/UN
R5058 3900/J6
Q5007 2SA1022-CTX
R5061 5600/J6
R5060 10K/J6
R5059 10K/J6
R5062 3900/J6
(1) TESTMOD2
C5069 0.1/UFN
C5067 0.1/UFN
C5066 0.1/UFN
+7.5V
FL5004 VLF0931
IC5010 AN7805
C5007 16V47/EVV
C5061 0.1/UFN
C5008 16V47/EVV
C5062 0.1/UFN
C5009 16V47/EVV
@exP +7.5A
@exP +5A
-7.5V
FL5005 VLF0931
IC5011 AN7905F
C5010 16V47/EVV
C5063 0.1/UFN
C5011 16V47/EVV
C5064 0.1/UFN
C5012 16V47/EVV
@exP -7.5A
@exP -5A
+5V
FL5002 VLF0931
C5003 16V47/EVV
C5057 0.1/UFN
C5004 16V47/EVV
C5058 0.1/UFN
@exP +5D
-5V
FL5003 VLF0931
C5005 16V47/EVV
C5059 0.1/UFN
C5006 16V47/EVV
C5060 0.1/UFN
@exP -5D

COMPONENT NAME	RF AMP	01/05
CIRCUIT BOARD NO.	MODEL NO.	
VEP85049A		
	SCM190	


RECMODE
REC_TEST
RF_DAT
RF_CLK
RF_HALD_H
+5D
R5063 10K/J6
R5064 10K/J6
R5065 10K/J6
R5069 100/J6
R5070 100/J6
R5071 100/J6
IC5013 MB88344PFV
TG5002 VJR0646
TP5007 VJR0646
TP5008 VJR0646
IC5014 NJM082BM-T1
IC5015 NJM082BM-T1
IC5016 NJM082BM-T1
IC5008 NJM082BM-T1
IC5017 MC14053BF-R
IC5009 MC14053BF-R
IC5004 NJM082BM-T1
REC_A_CURR
REC_B_CURR
REC_A_FREQ
REC_B_FREQ
RP_MAG
RP_PHASE
RP_A
PB_MAG
PB_PHASE
PB_A
RE_A_CURR
RE_B_CURR
TP5011 VJR0646
TP5012 VJR0646
VR5013
VR5014
+5A
+7.5A
-7.5A
-5A
GNDA

COMPONENT NAME	RF AMP	02/05
CIRCUIT BOARD NO.	MODEL NO.	
VEP85049A		
	SCM191	


1
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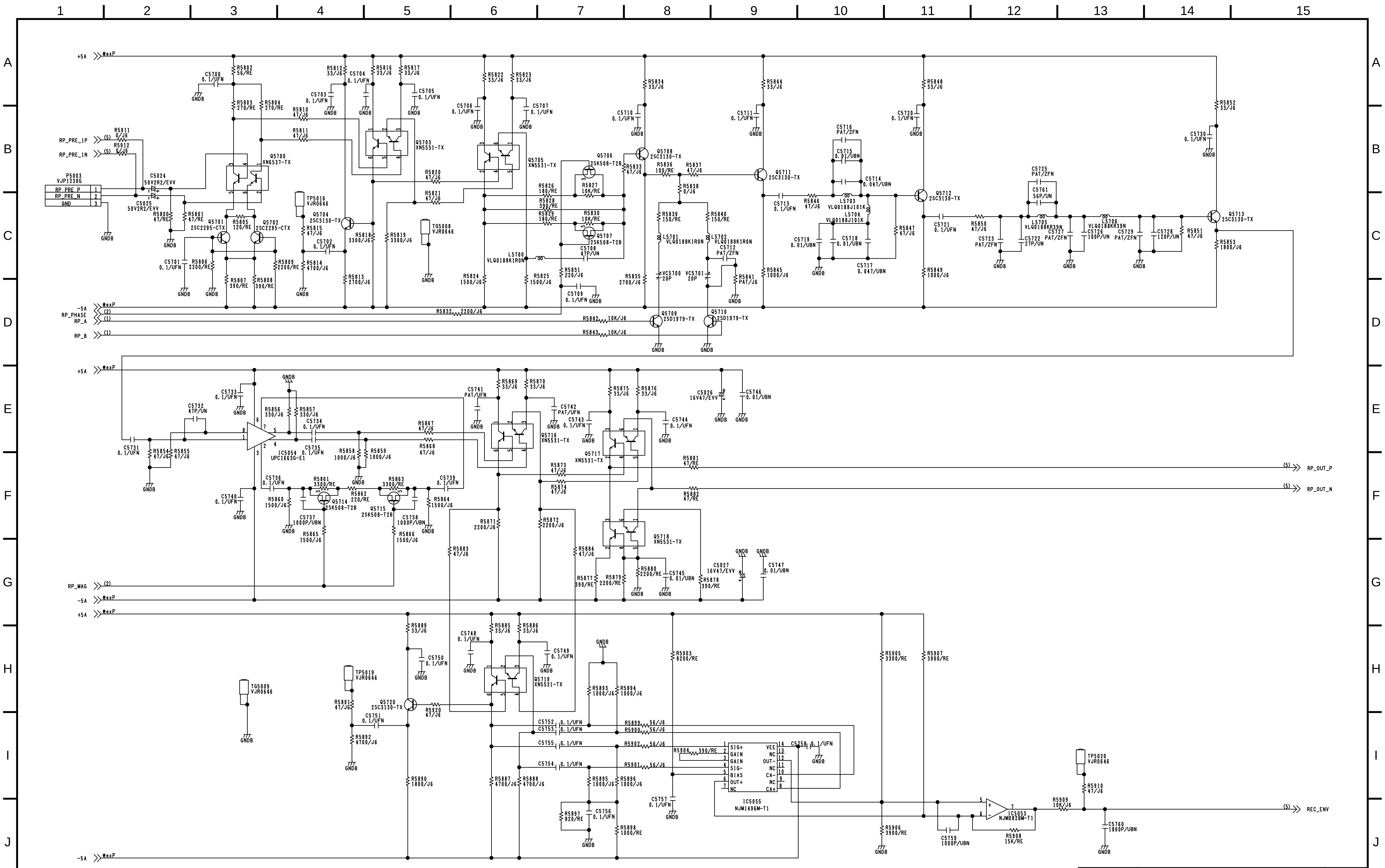
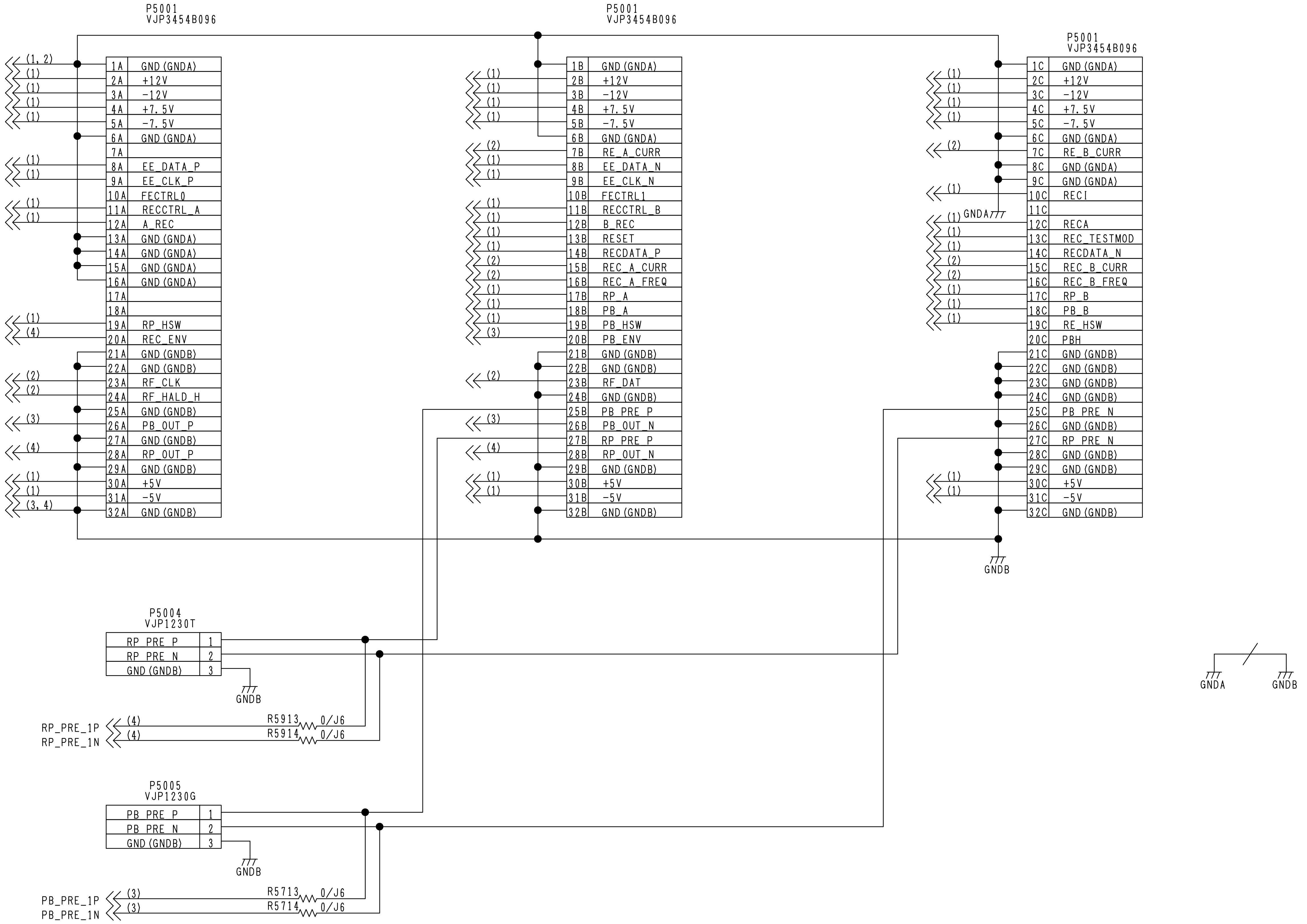
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
K
+5A
PB_PRE_1P
PB_PRE_1N
P5002
VJP1230T
PB_PRE_P
PB_PRE_N
GND
C5020
50V2R2/EVV
C5021
50V2R2/EVV
R5711
0/J6
R5712
0/J6
Q5600
XN6537-TX
Q5601
2SC2295-CTX
Q5602
2SC2295-CTX
Q5603
XN5531-TX
Q5604
2SC3130-TX
Q5605
XN5531-TX
Q5606
2SK508-T2B
Q5607
2SK508-T2B
Q5608
2SC3130-TX
Q5609
2SD1979-TX
Q5610
2SD1979-TX
Q5611
2SC3130-TX
Q5612
2SC3130-TX
Q5621
2SC3130-TX
Q5613
2SC3130-TX
TP5015
VJR0646
TG5005
VJR0646
L5600
VLQ0188K1R0N
L5601
VLQ0188KR47N
L5602
VLQ0188KR47N
L5603
VLQ0188J101K
L5604
VLQ0188J101K
L5605
VLQ0163KR39T
L5606
VLQ0163KR39T
VC5600
VC5601
-5A
PB_PHASE
PB_A
PB_B
R5632 2200/J6
R5642 10K/J6
R5643 10K/J6
GNDB
IC5051
UPC1663G-E1
Q5614
2SK508-T2B
Q5615
2SK508-T2B
Q5616
XN5531-TX
Q5617
XN5531-TX
Q5618
XN5531-TX
C5022
16V47/EVV
C5023
16V47/EVV
R5681
47/RE
R5682
47/RE
PB_OUT_P
PB_OUT_N
PB_MAG
TP5017
VJR0646
TG5006
VJR0646
Q5620
2SC3130-TX
Q5619
XN5531-TX
IC5052
NJM1496M-T1
SIG+
GAIN
GAIN
SIG-
BIAS
OUT+
NC
VEE
NC
OUT-
NC
CA-
NC
CA+
IC5053
NJM082BM-T1
R5709
10K/J6
R5708
15K/RE
TP5018
VJR0646
R5710
47/J6
C5660
1800P/UBN
TG5007
VJR0646
PB_ENV
(5)
@exP

COMPONENT NAME	RF AMP	03/05
CIRCUIT BOARD NO.	MODEL NO.	
VEP85049A		
	SCM192	


+5A
RP_PRE_1P
RP_PRE_1N
P5003
VJP1230G
RP_PRE_P
RP_PRE_N
GND
-5A
RP_PHASE
RP_A
RP_B
Q5700 XN6537-TX
Q5701 2SC2295-CTX
Q5702 2SC2295-CTX
Q5703 XN5531-TX
Q5704 2SC3130-TX
Q5705 XN5531-TX
Q5706 2SK508-T2B
Q5707 2SK508-T2B
Q5708 2SC3130-TX
Q5709 2SD1979-TX
Q5710 2SD1979-TX
Q5711 2SC3130-TX
Q5712 2SC3130-TX
Q5713 2SC3130-TX
TP5016 VJR0646
TG5008 VJR0646
L5700 VLQ0188K1R0N
L5701 VLQ0188K1R0N
L5702 VLQ0188K1R0N
L5703 VLQ0188J101K
L5704 VLQ0188J101K
L5705 VLQ0188KR39N
L5706 VLQ0188KR39N
VC5700 20P
VC5701 20P
IC5054 UPC1663G-E1
Q5714 2SK508-T2B
Q5715 2SK508-T2B
Q5716 XN5531-TX
Q5717 XN5531-TX
Q5718 XN5531-TX
C5026 16V47/EVV
C5027 16V47/EVV
RP_OUT_P
RP_OUT_N
RP_MAG
TG5009 VJR0646
TP5019 VJR0646
Q5719 XN5531-TX
Q5720 2SC3130-TX
IC5055 NJM1496M-T1
SIG+
GAIN
GAIN
SIG-
BIAS
OUT+
NC
VEE
NC
OUT-
NC
CA-
NC
CA+
IC5053 NJM082BM-T1
TP5020 VJR0646
REC_ENV
GNDB

COMPONENT NAME	RF AMP	04/05
CIRCUIT BOARD NO.	MODEL NO.	
VEP85049A		
	SCM193	


P5001
VJP3454B096
(1, 2)
(1)
(1)
(1)
(1)
1A GND (GNDA)
2A +12V
3A -12V
4A +7.5V
5A -7.5V
6A GND (GNDA)
7A
(1)
(1)
8A EE_DATA_P
9A EE_CLK_P
10A FECTRL0
(1)
(1)
11A RECCTRL_A
12A A_REC
13A GND (GNDA)
14A GND (GNDA)
15A GND (GNDA)
16A GND (GNDA)
17A
18A
(1)
(4)
19A RP_HSW
20A REC_ENV
21A GND (GNDB)
22A GND (GNDB)
(2)
(2)
23A RF_CLK
24A RF_HALD_H
25A GND (GNDB)
(3)
26A PB_OUT_P
27A GND (GNDB)
(4)
28A RP_OUT_P
29A GND (GNDB)
(1)
(1)
(3, 4)
30A +5V
31A -5V
32A GND (GNDB)
P5001
VJP3454B096
1B GND (GNDA)
(1)
(1)
(1)
(1)
2B +12V
3B -12V
4B +7.5V
5B -7.5V
6B GND (GNDA)
(2)
(1)
(1)
7B RE_A_CURR
8B EE_DATA_N
9B EE_CLK_N
10B FECTRL1
(1)
(1)
(1)
(1)
(2)
(2)
(1)
(1)
(1)
(3)
11B RECCTRL_B
12B B_REC
13B RESET
14B RECDATA_P
15B REC_A_CURR
16B REC_A_FREQ
17B RP_A
18B PB_A
19B PB_HSW
20B PB_ENV
21B GND (GNDB)
22B GND (GNDB)
(2)
23B RF_DAT
24B GND (GNDB)
25B PB_PRE_P
(3)
26B PB_OUT_N
27B RP_PRE_P
(4)
28B RP_OUT_N
29B GND (GNDB)
(1)
(1)
30B +5V
31B -5V
32B GND (GNDB)
P5001
VJP3454B096
1C GND (GNDA)
(1)
(1)
(1)
(1)
2C +12V
3C -12V
4C +7.5V
5C -7.5V
6C GND (GNDA)
(2)
7C RE_B_CURR
8C GND (GNDA)
9C GND (GNDA)
(1)
10C RECI
11C
GNDA
(1)
(1)
(1)
(2)
(2)
(1)
(1)
(1)
12C RECA
13C REC_TESTMOD
14C RECDATA_N
15C REC_B_CURR
16C REC_B_FREQ
17C RP_B
18C PB_B
19C RE_HSW
20C PBH
21C GND (GNDB)
22C GND (GNDB)
23C GND (GNDB)
24C GND (GNDB)
25C PB_PRE_N
26C GND (GNDB)
27C RP_PRE_N
28C GND (GNDB)
29C GND (GNDB)
(1)
(1)
30C +5V
31C -5V
32C GND (GNDB)
GNDB
P5004
VJP1230T
RP_PRE_P 1
RP_PRE_N 2
GND (GNDB) 3
GNDB
RP_PRE_1P
RP_PRE_1N
(4)
(4)
R5913
R5914
0/J6
0/J6
P5005
VJP1230G
PB_PRE_P 1
PB_PRE_N 2
GND (GNDB) 3
GNDB
PB_PRE_1P
PB_PRE_1N
(3)
(3)
R5713
R5714
0/J6
0/J6
GNDA
GNDB

COMPONENT NAME	RF AMP	05/05
CIRCUIT BOARD NO.	MODEL NO.	
VEP85049A		
	SCM194	